

LEGISLATIVE RESEARCH COMMISSION

**Water Issues**



REPORT TO THE  
1995 GENERAL ASSEMBLY  
OF NORTH CAROLINA  
1996 REGULAR SESSION

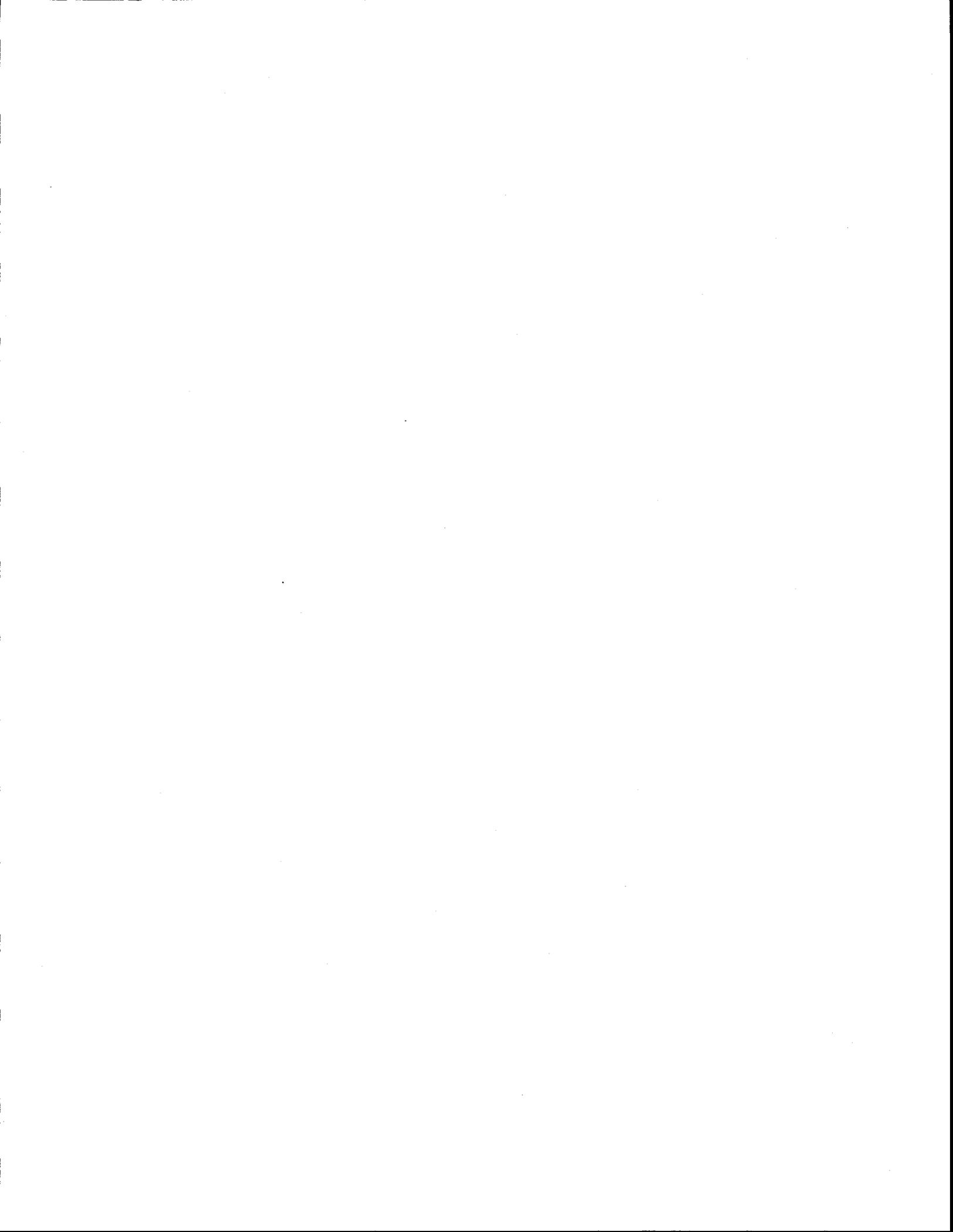


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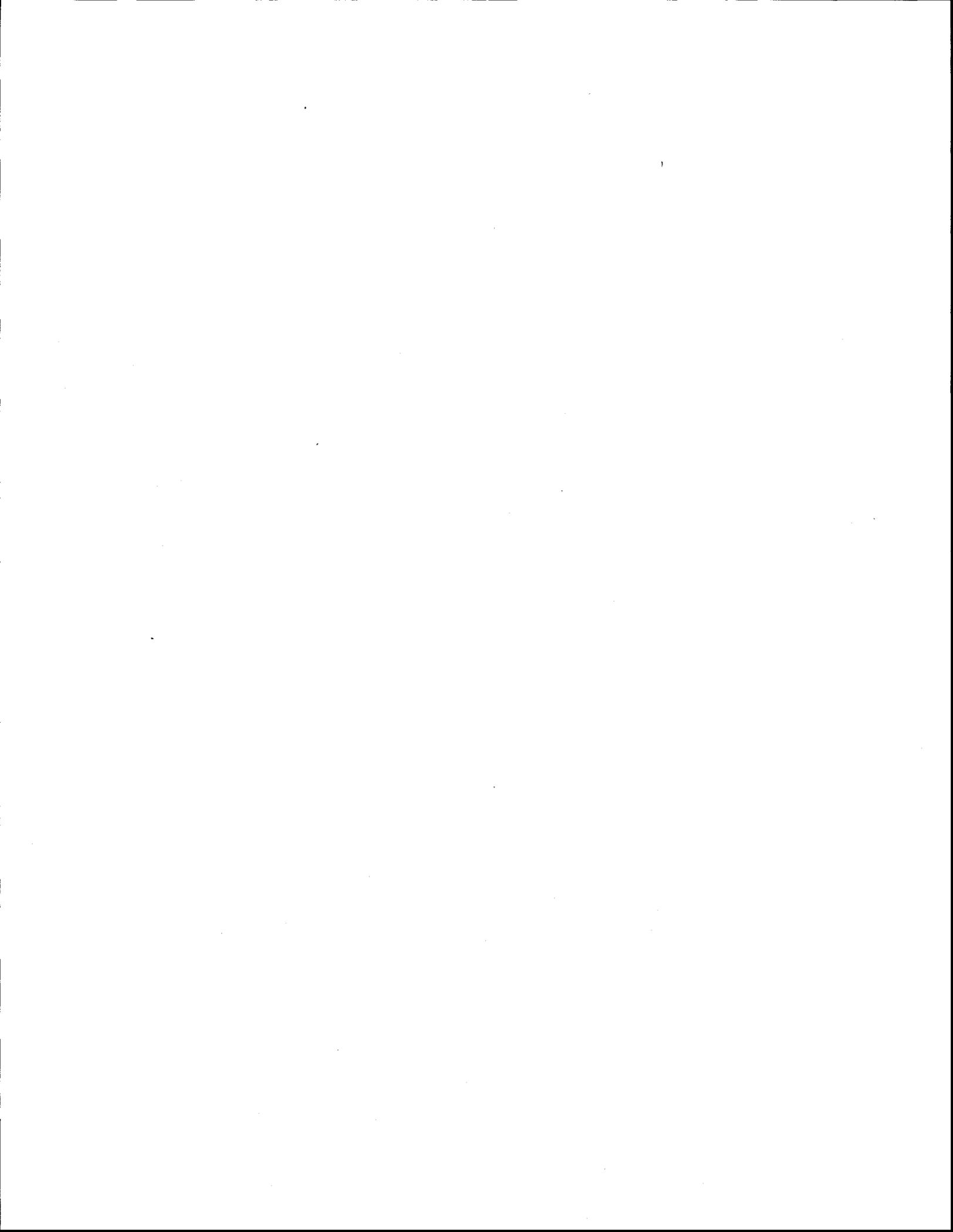
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STATE OF NORTH CAROLINA  
LEGISLATIVE RESEARCH COMMISSION  
STATE LEGISLATIVE BUILDING  
RALEIGH 27601-1096



May 1, 1996

TO THE MEMBERS OF THE 1995 GENERAL ASSEMBLY (REGULAR SESSION 1996):

The Legislative Research Commission herewith submits to you for your consideration its interim report on the drinking water testing requirements and costs under the federal Safe Drinking Water Act. The report was prepared by the Legislative Research Commission's Committee on Water Issues pursuant to G.S. 120-30.17(1).

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Harold A. Brubaker", written over a horizontal line.

Harold A. Brubaker  
Speaker of the House

A handwritten signature in cursive script, appearing to read "Marc Basnight", written over a horizontal line.

Marc Basnight  
President Pro Tempore

Cochair  
Legislative Research Commission









1995-1996

LEGISLATIVE RESEARCH COMMISSION

MEMBERSHIP

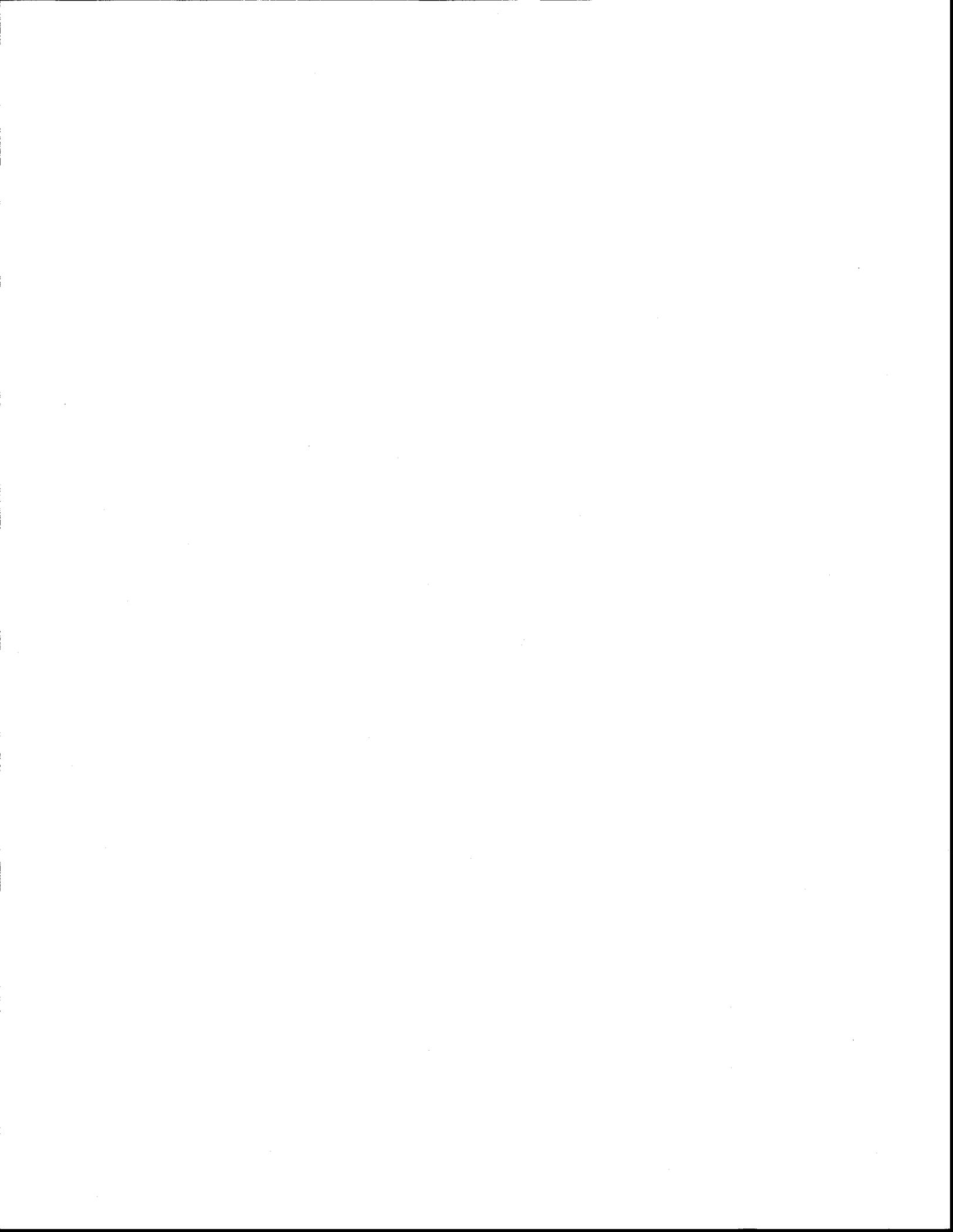
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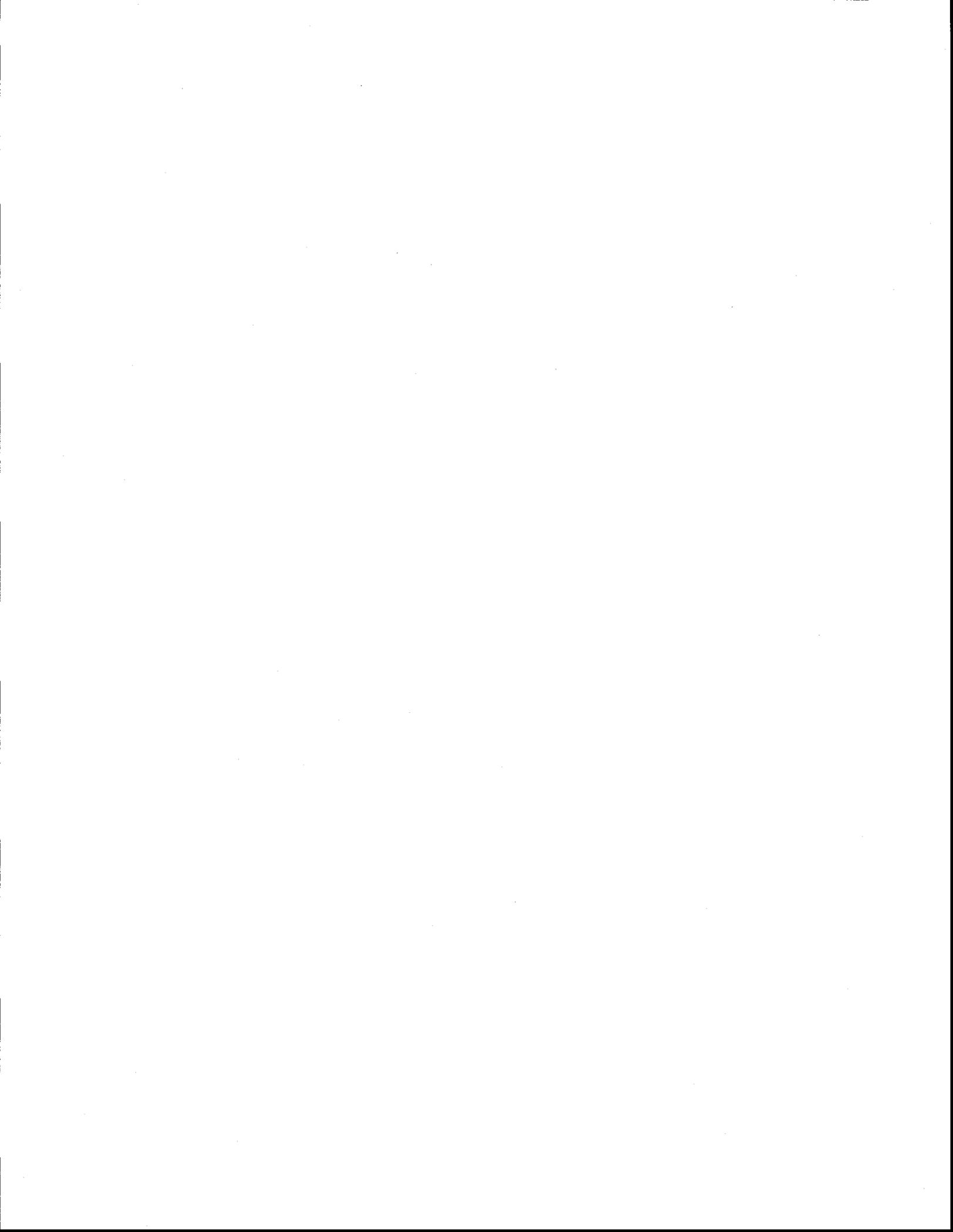


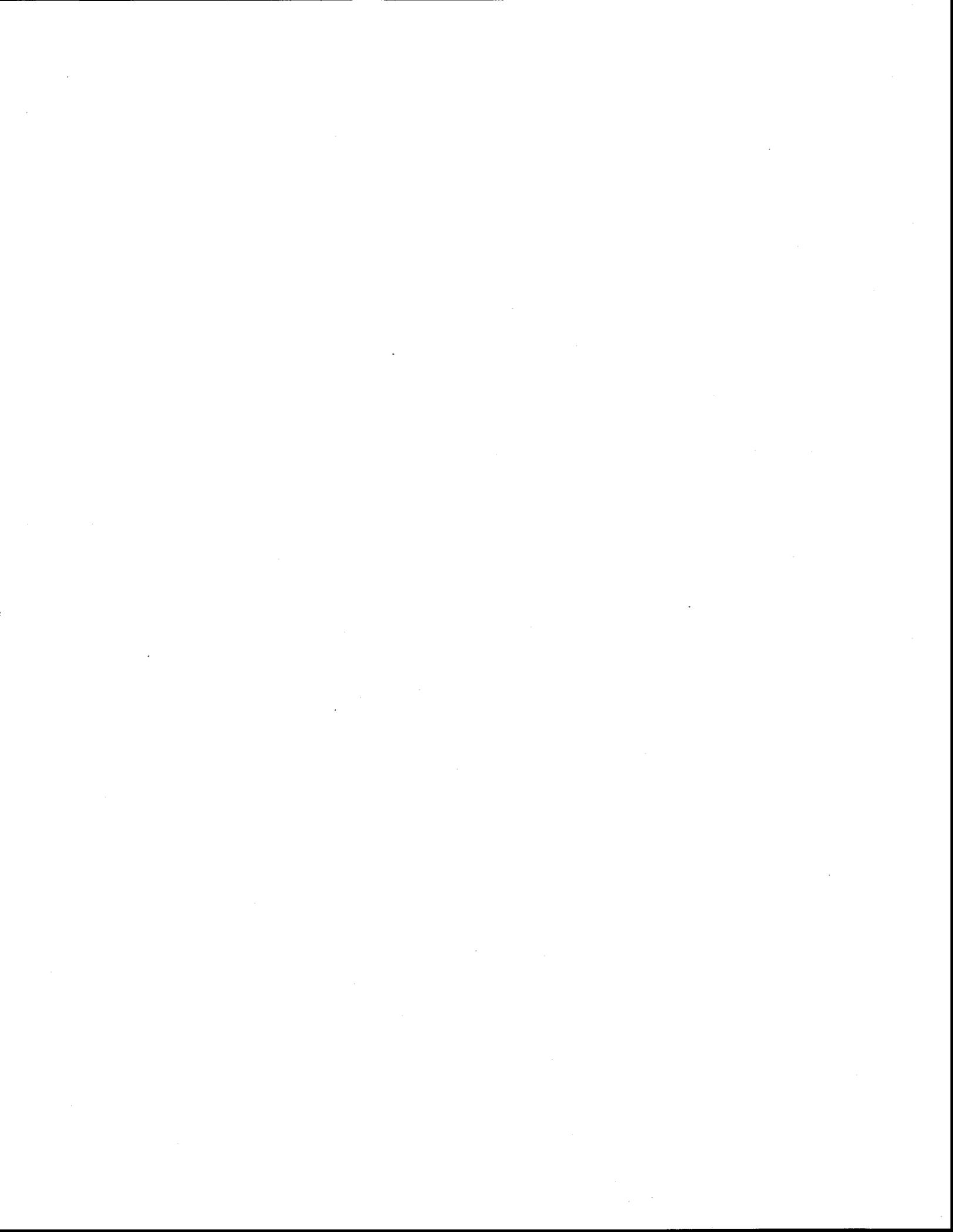
## PREFACE

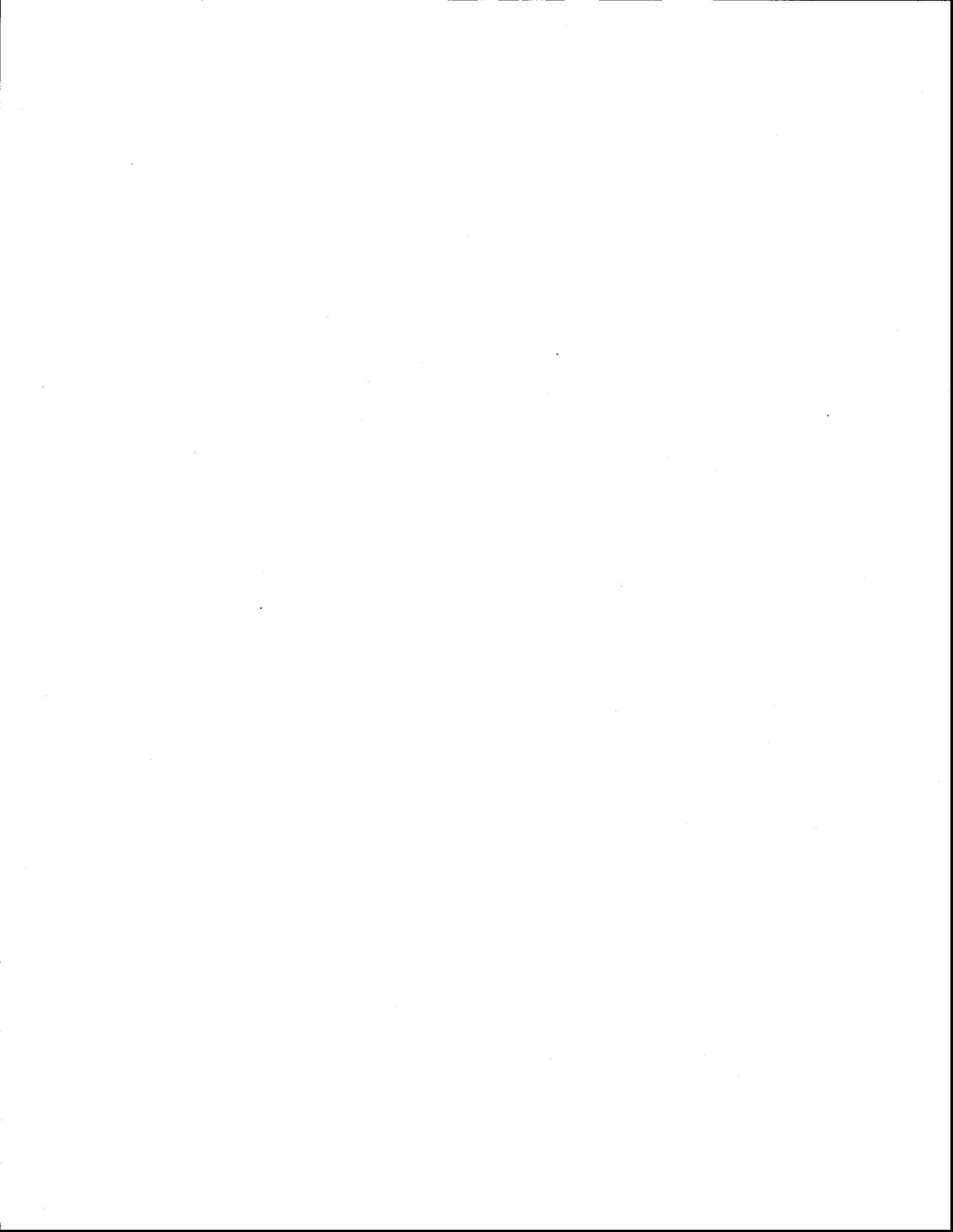
The Legislative Research Commission, established by Article 6B of Chapter 120 of the General Statutes, is the general purpose study group in the Legislative Branch of State Government. The Commission is cochaired by the Speaker of the House and the President Pro Tempore of the Senate and has five additional members appointed from each house of the General Assembly. Among the Commission's duties is that of making or causing to be made, upon the direction of the General Assembly, "such studies of and investigations into governmental agencies and institutions and matters of public policy as will aid the General Assembly in performing its duties in the most efficient and effective manner" (G.S. 120-30.17(1)).

The Legislative Research Commission, prompted by actions during the 1995 Session, has undertaken studies of numerous subjects. These studies were grouped into broad categories and each member of the Commission was given responsibility for one category of study. The Cochairs of the Legislative Research Commission, under the authority of G.S. 120-30.10(b) and (c), appointed committees consisting of members of the General Assembly and the public to conduct the studies. Cochairs, one from each house of the General Assembly, were designated for each committee.

The study of the drinking water testing requirements and costs under the federal Safe Drinking Water Act was authorized by Part II, Section 2.1 (22) of Chapter 542 of the 1995 Session Laws. Part II of Chapter 542 allows for studies authorized by that Part for the Legislative Research Commission to consider House Bills 46 and 930 and Senate Bill 95 in determining the nature, scope and aspects of the study. The relevant portions of Chapter 542 and House Bill 930 are included in Appendix A. The Legislative Research Commission authorized this study under authority of G.S. 120-30.17(1) and grouped this study in its Environment Grouping area under the direction of Senator Henry E. McKoy. The Committee was chaired by Senator James D. Speed and Representative Cary D. Allred. The full membership of the Committee is listed in Appendix B of this report. A committee notebook containing the committee minutes and all information presented to the committee is filed in the Legislative Library.







## INTRODUCTION

The phenomenal increase in drinking water testing requirements and costs under the federal Safe Drinking Water Act (SDWA) in the past five years has sparked the justified ire of many in the regulated community, especially the small water system operators. This Committee was charged with studying these drinking water testing requirements and the fees charged by private, commercial laboratories to conduct the analyses and recommending ways to minimize the costs of compliance. The following material is provided as a framework for the Committee's proceedings, findings, and recommendations.

### *The impact of the Safe Drinking Water Act*

Monitoring the safety of public water supply systems is not a new concept in North Carolina. The State initiated its first public water supply program in 1911. At the national level, the federal government set the first drinking water standards in 1914. Although the federal standards initially applied only to interstate carriers, North Carolina adopted these standards for public water supply systems in 1962. The original standards included 16 contaminants and the State charged an annual fee ranging from \$15 to \$64 to cover the cost of the analyses.

In 1974, Congress enacted the SDWA.<sup>1</sup> Administration of the act was vested in the U.S. Environmental Protection Agency. The SDWA required all public water systems to test for the 16 contaminants previously listed and directed the EPA to develop standards for more contaminants. By 1980 standards had been set for only 7 additional contaminants; six pesticides and trihalomethanes. In 1986 the SDWA came up for reauthorization. Reflecting congressional unhappiness with the slow pace of setting additional drinking water standards, the act listed 83 new contaminants and directed the EPA to develop standards for these contaminants within three years. EPA was also directed to develop standards for an additional 25 contaminants every three years. To date, EPA has developed or proposed standards for 88 contaminants.

The 1986 reauthorization of the SDWA substantially increased the regulatory burden on public water supply systems, especially small community water systems. Community water systems are those that serve at least 15 connections or 25 year round residents. Small water systems serve 3,300 or fewer people. In North Carolina there are 2,637 community water supply systems of which 2,437 are small systems. Few states, notably Texas, have so many small water systems. These new drinking water regulations not only required additional testing for the newly listed contaminants, but also dramatically increased testing costs, reflecting the increasing sophistication and frequency of sampling required.

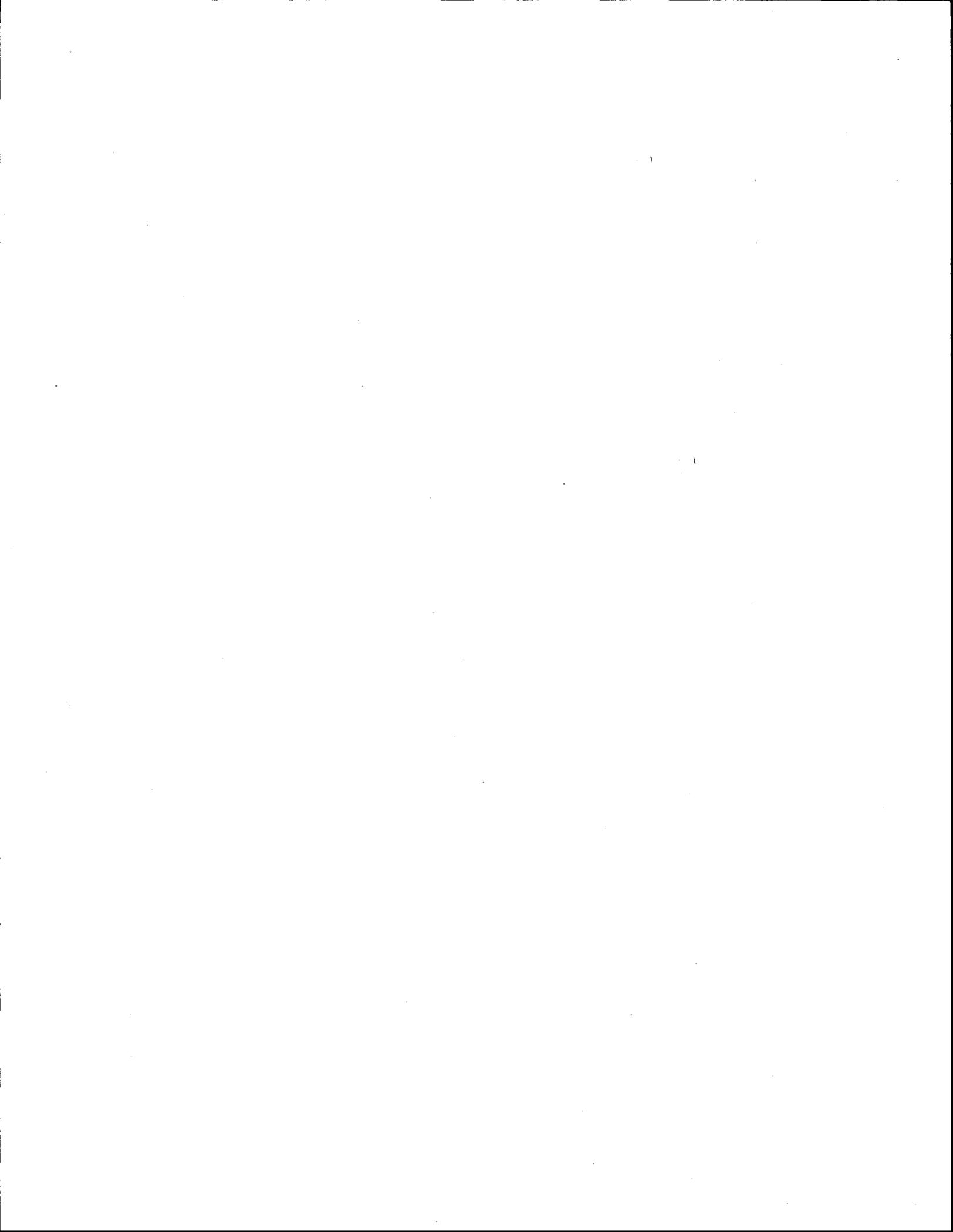
Of all the new tests mandated by EPA the group that provoked the most controversy and outcry from the small water systems were the synthetic organic chemical group (SOC's). The SOC group consists of 8 different tests covering 42 compounds. They are the most expensive of the tests currently required by EPA. SOC tests were first required of the large public water systems in the early 1990's. They were phased in over a three year period and became required of the small water systems in 1995. According to EPA regulations<sup>2</sup>, SOC's are performed on a three year cycle with quarterly analyses being performed in the first year. The estimated average cost in North Carolina for a three year cycle of SOC's was \$4,400 per entry point to the water distribution system.

Because of their expense, the SOC tests were the focal point for lab cost comparisons during this study. While small water system operators, most notably the mobile home park associations, have been quite vocal in their opposition to the increased regulatory requirements for drinking water, the fees charged by the private laboratories for these tests have become a rallying point for their efforts to seek relief, and, in particular, to have the State Laboratory of Public Health (State Lab) reopened for drinking water compliance testing analyses.

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<sup>1</sup> P.L. 93-253, as amended.

<sup>2</sup> 40 CFR Part 141



The new standards mandated by the SDWA also created sharply increased demands on the resources of the Division of Environmental Health, Department of Environment, Health, and Natural Resources (DEH). To meet the additional demand for technical assistance, planning, enforcement activities, and the provision of other services, the 1991 General Assembly passed legislation allowing DEH to collect annual permit fees ranging from \$150 to \$850 from public water systems. The monies collected allowed DEH to fund an additional 13 positions in the Public Water Supply Section. Within the funds available to it, DEH has sought and obtained several waivers from EPA standards that have provided substantial cost savings to the small water systems. The Division, however, does not have the additional resources necessary to implement a formal effort to identify and obtain waivers from EPA.

### *The State Laboratory of Public Health*

Public ire over the high costs of compliance testing under the SDWA has been further fueled by reports that the State Lab could perform the SOC tests for less than half of what private laboratories charge. The State Lab, however, phased out its provision of compliance testing services in 1992. The decision to end the State Lab's participation in the compliance testing market came after several years of study and negotiation between the previous administration and the private labs. The decision reflected the continuing trend toward privatization of governmental services where possible.

Prior its termination of services in 1992, the State Lab had provided laboratory services on a fee for service basis. The State Lab was in direct competition with private industry. Charges for services at the State Lab in general were the average of private lab charges plus 10%. In 1985, the Commercial Laboratory Association of North Carolina (CLANC) brought their concerns about this private/public competition to the attention of the General Assembly. As a result of their lobbying efforts, the 1987 General Assembly enacted SB 840 (Ch. 502 of the 1987 Session Laws) instructing the Department of Human Resources to meet with representatives of the private laboratory industry and study the issues of privatization and the upgrading of the certification process for private labs. The report to the 1988 General Assembly proposed the gradual elimination of compliance testing by the State Lab over the time period of 1988 through 1991. It also recommended stricter standards for certification of the private labs. As a result of this report, and in response to the commitment of the State to close the State Lab, the private labs made the capital investment necessary to upgrade their operations and meet the new certification standards.

The State Lab completed its phase out of compliance testing in 1992. It does continue to provide testing for radiologicals as there is no lab certified in the State to perform these analyses, and to provide drinking water testing services to local health departments. The current Administration continues to support the decision to privatize drinking water analyses.

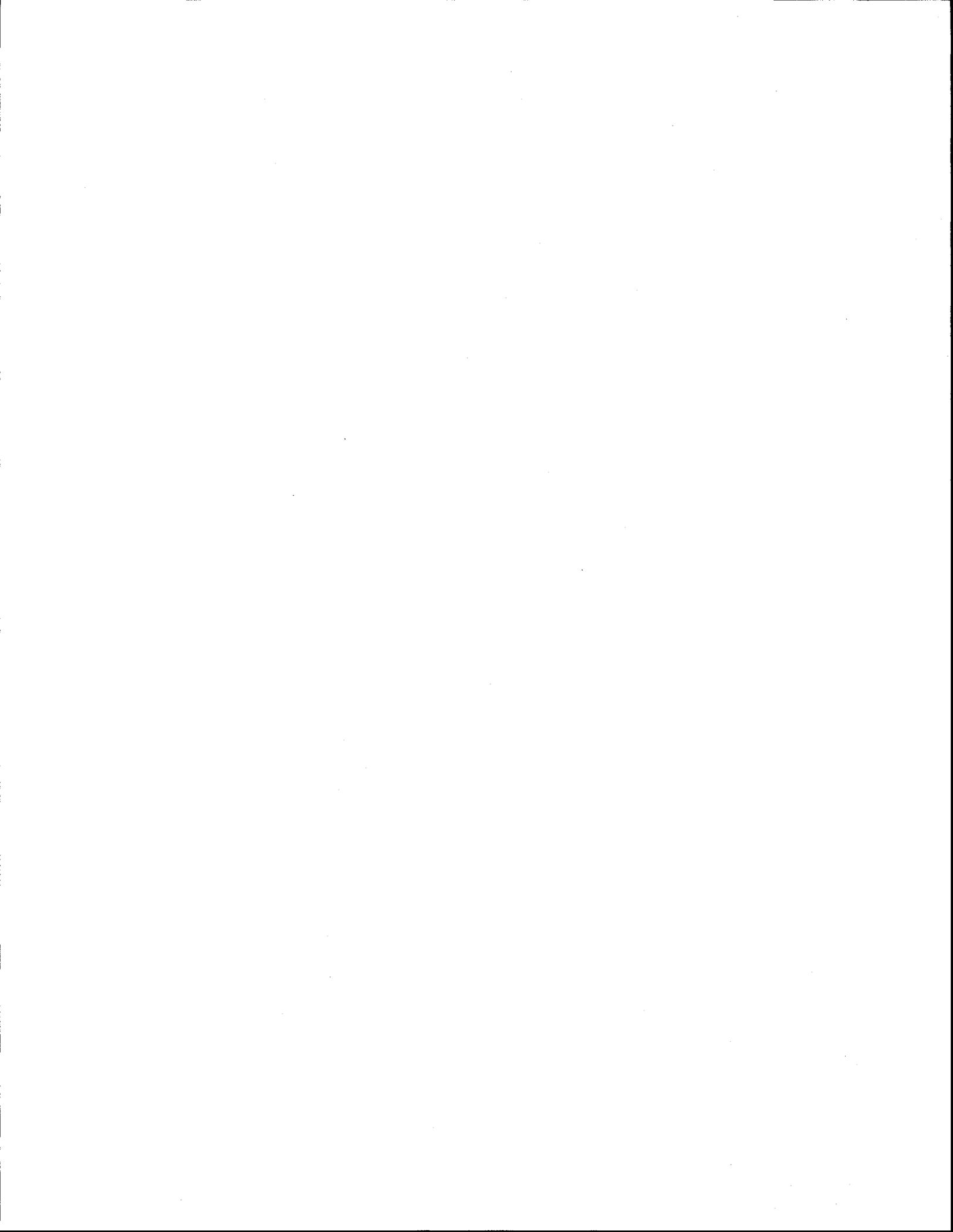
### *Waivers*

Although the EPA sets the standards for contaminants under the SDWA, states are encouraged to seek waivers to reduce the costs of monitoring, especially for small water systems. To obtain a waiver from EPA, however, the State must demonstrate to EPA's satisfaction that granting the waiver will not present a public health risk. This is a time consuming process involving extensive vulnerability assessments. As of 1994, approximately 21 states have established waiver programs and another 22 have programs under development.<sup>3</sup>

North Carolina has been active in seeking waivers from the EPA drinking water standards. In 1995 the DEH obtained statewide waivers for a number of contaminants in the pesticide/SOC/pcb categories which have, and will continue, to generate considerable reductions in monitoring costs. The statewide waivers include diquat, endothal, glyphosate, EDB, and DBCP. In addition, small water systems may qualify for a susceptibility waiver for the SOC sampling. To obtain this waiver, a small system must collect a sample from each entry point into the system for analysis. If the analysis shows SOC's below the

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<sup>3</sup> Source: North Carolina Rural Water Association



detection limits and the operator completes a vulnerability survey, then testing requirements are reduced from four quarterly samples to once a year or once every three years depending on the source vulnerability. The State has also obtained dioxin waivers for all small water systems. DEH estimates that the waivers obtained to date should save water systems at least 12 million dollars during the first three year testing cycle (1995-1998).

To date, 1,900 small water systems have obtained waivers. DEH is looking at ways to assist the remaining eligible systems to complete the waiver process as well as pursuing additional waivers from EPA.

#### *Other activities*

A number of other measures have been enacted or are proposed that should help in curtailing the cost of compliance with the SDWA. The 1995 General Assembly passed legislation requiring certified labs to perform composite testing of water samples.<sup>4</sup> Real relief from the impact of the SDWA will need to come from the federal government. In November 1995 S1316, the SDWA Amendments Act of 1995, unanimously passed the U.S. Senate. If passed by the House, it would provide additional flexibility to the states to tailor drinking water monitoring requirements to the conditions in the state, eliminate the requirement to list an additional 25 contaminants every three years, provide additional variances for small water systems, and provide funds for technical assistance, operator training, and state program administration.

### COMMITTEE PROCEEDINGS

The Legislative Research Commission's Committee on Water Issues met 5 times from January 1996 through April 1996.

#### *January 18, 1996*

Senator Henry E. McKoy, LRC member, called the initial meeting on January 18, 1996. After brief opening remarks he turned the Committee over to the Cochair, Senator James D. Speed and Representative Cary D. Allred. The emphasis at this first meeting was to familiarize Committee members with the history of the drinking water program and the issues arising from its implementation. Ms. Linda Sewall, Director of DEH outlined for the Committee the history of the federal SDWA, the development of the drinking water program in North Carolina, including obtaining primacy for the federal act, DEH's efforts to obtain waivers and reduce testing requirements under the act. Ms. Sewall noted that the smallest water systems were those hit hardest by the increased federal standards. She also noted that efforts were underway in Congress to address the excessive regulatory burden that had been created with the 1986 reauthorization of the SDWA.

Dr. Ron Levine, State Health Director presented the Department of Environment, Health, and Natural Resources' position on whether to expand the State Lab for drinking water compliance analyses. He stated that DEHNR supports the decision made by the previous administration to privatize compliance testing work. He also said that the private laboratories in North Carolina were providing quality services and that the State had a strong certification program.

Mr. Edsel B. Rich, representing mobile home park owners of North Carolina spoke about the high cost of drinking water tests. He said that the mobile home park owners wanted safe drinking water, but at a reasonable cost.

After Mr. Rich's presentation, the Committee was provided handouts by Mona Moon, Fiscal Research Division, on the charges for drinking water tests in North Carolina. Because of their expense, the SOC group was the focus of the discussion. Charges by private labs for SOC tests in 1995 ranged from \$1,000 to \$1,700 per sample. Estimates prepared by the State Lab indicated that it could perform the SOC analyses for \$350.

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<sup>4</sup> SB 286; Chapter 25 of the 1995 Session Laws.



*February 15, 1996*

At the second meeting, February 15, 1996, the Committee continued to focus on drinking water test charges. John Sheats, Deputy Director of Laboratory Services began by stating that the original cost estimates prepared by the State Lab were too low and were in the process of being revised. Apparently several cost factors had been omitted from the budgeting process. After Mr. Sheats presentation, Mona Moon, Fiscal Research, provided the Committee with comparative cost figure from several other State's whose public health labs perform drinking water tests. Again focusing on SOC's her information showed that costs in other states ranged from \$450 to \$1,200 per sample. Variables as to methodology and types of SOC tests included accounted in part for the broad range of costs. Ms. Moon's research also showed that private lab charges for water tests had decreased in 1996. The range of charges for private lab SOC work is now \$700 to \$760.

The next part of the meeting consisted of presentations by a number of interested parties. Ricky Moorefield, Alamance County Commissioner presented a resolution passed by the Alamance County Board of Commissioners requesting that the State Lab resume compliance testing. Cindy Kirby, President of the North Carolina Community Water Systems Association spoke of the need for relief from high water testing costs. She noted particularly the extreme increase in costs in 1995 and said that there was no ceiling on what private labs could charge for their work. Her organization would like to see the State Lab reopened.

Mr. A.J. Holt, Vice-President of the Alamance County Mobile Home Park Association spoke to the Committee about his frustrations in collecting data on the charges by the State Lab to county health departments for water testing. He reemphasized the large difference between the State Lab's estimated costs for the SOC tests and the charges by the private labs. Mrs. Dorothy Chewning was the final speaker of the day on behalf of the small community water systems. Mrs. Chewning is Vice President of the Multicounty Mobile Home Park Association. She spoke about the increasing burden placed upon small water system operators since she opened her mobile home park in 1969. When the SOC tests were phased in 1995, Mrs. Chewning chose to close her park because the park did not produce adequate revenue to cover the estimated \$8,000 to \$10,000 in water testing costs she would incur to remain in business. She now operates the mobile home park, but keeps the resident population under the small water system threshold of 25 people.

Henry Jones, Counsel for CLANC and John Melvin, member, CLANC, gave the final two presentations of the day. Mr. Jones addressed the history of the negotiations between CLANC and the previous administration and the decision to terminate water testing services at the State Lab. He presented the industry's position in opposition to proposals to reopen the State Lab in competition with private industry. Mr. Melvin pointed out that costs for drinking water testing had decreased substantially (83%) from the year before due to the availability of waivers obtained by DEH. He stated that his laboratory could perform all required drinking water tests for a small water system that had obtained all available waivers for \$53 per month over the three year cycle. He noted that the State Lab's estimated costs for SOC tests were 58% lower than the average cost in other states. He questioned the ability of the State to actually provide the service at the cost quoted and pointed out that his direct costs alone for such tests were higher than the State estimate.

*March 11, 1996*

At the March 11, 1996 meeting the Committee heard from Ms. Beryl Wade, Counsel to the Governor. Ms. Wade confirmed that the Administration continued to support the decision to privatize laboratory services in North Carolina. She noted that a minimum of \$3.4 million dollars would be required to expand and equip the State Lab to perform the required drinking water tests.

Dr. Lou Turner, Director of Laboratory Services presented the revised cost estimates from the State Lab. Under the new estimate, the SOC tests could be run for \$450. Ms. Moon, Fiscal Research, presented her calculations that the average total annual charges by a private lab for a waived small water system would be \$952.64 per year over the three year cycle or \$79.39 per month. Her figures showed that the State Lab could provide the same services for \$615 per year or \$51.25 per month.



After discussing the comparative cost data, and the capital expenditure necessary to resume compliance testing at the State Lab, the Committee's attention turned to alternate methods of mitigating drinking water testing costs. Linda Sewall, Director, DEH gave an extensive presentation of potential State actions that could reduce the costs of drinking water analyses for small water systems.

The options addressed included fees, both per connection and per capita, for all public water supply systems, and a dedicated tax. Finally, Mr. Sammy Boyette, Administrator of the North Carolina Rural Water Association, spoke on the effectiveness of state waiver programs in reducing costs of mandatory drinking water tests. He presented data from a number of states showing the investment that each state had made in its waiver program and the cost savings that had been realized by their public water systems. He also noted that developing waivers was an extremely complex and expensive process. Linda Sewall, DEH, commented that her division had been pursuing waivers for the State within available resources. So far the waivers obtained have produced over \$12 million dollars in cost savings. There are additional waivers available to the State and her division will continue to pursue them as they are able. However, the division's resources are currently stretched to the limit with federally mandated activities. The Committee was informed that Senator Albertson had introduced a bill during the 1995 Session calling for a one time appropriation of \$414,546 for fiscal year 1995-1996. That bill, however, is not alive for the 1996 session.

Members of the Committee expressed interest in obtaining further information on waivers available to the State. Mr. Roger Swann, N.C. Rural Water Association told the Committee that one factor to consider when determining funding for a waiver program is the number of public water systems. States with 2,000 to 3,000 public water systems had invested approximately \$400,000 for their waiver programs. North Carolina, however, has close to 10,000 systems.

There was also considerable discussion on how to assist the 650 water systems that have not yet applied to obtain waivers already available. These systems will have to bear the full brunt of drinking water testing costs if they do not apply for waivers. DEH was asked to prepare a proposal on how to help those systems that had not yet applied for waivers and what additional resources the Division would need to implement a formal waiver program.

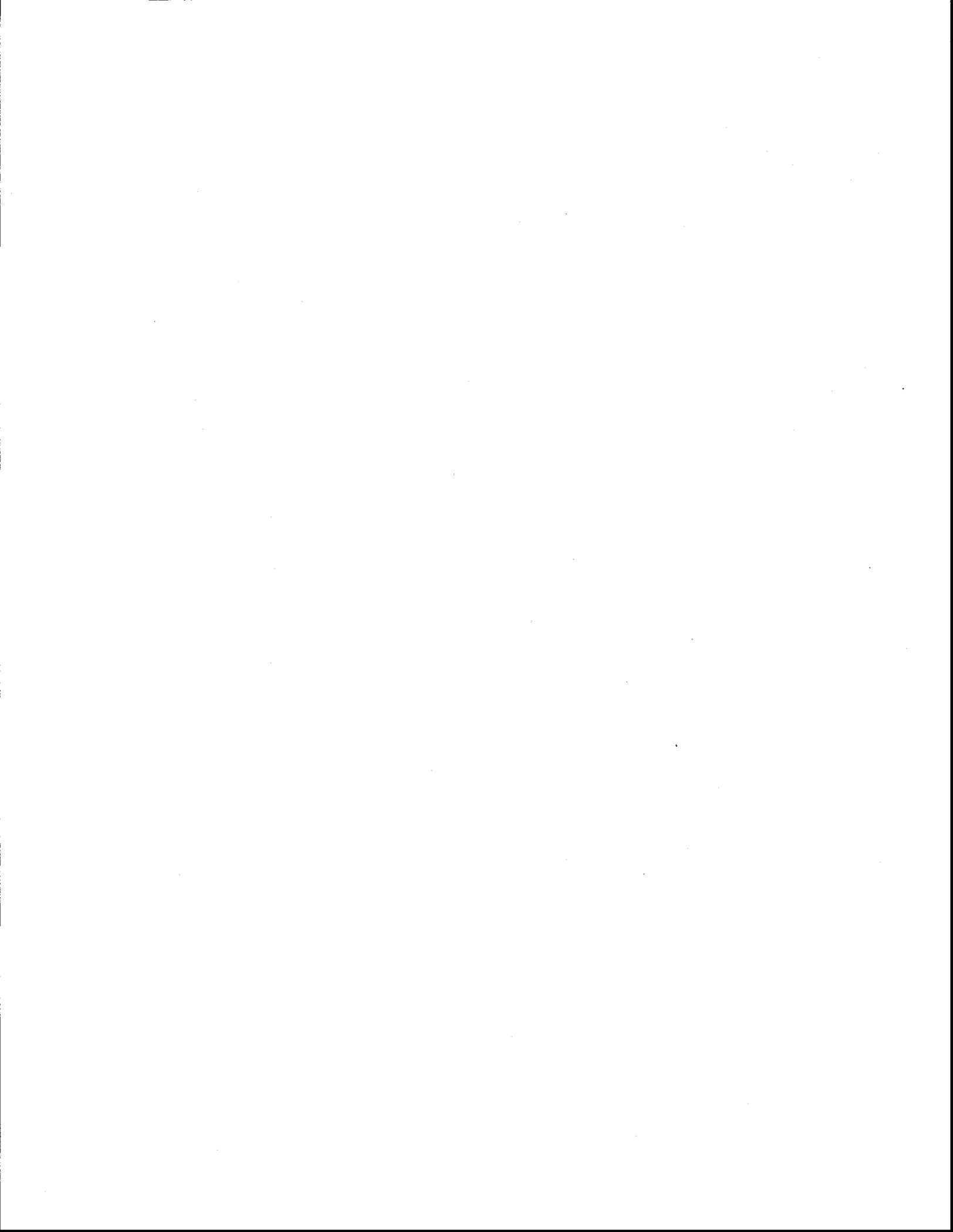
#### *April 1, 1996*

The Committee held its fourth meeting on April 1, 1996. As requested by the Committee, Linda Sewall, DEH, had prepared a presentation on what would be necessary for the State to implement a formal waiver program and what waivers the Division thought it would be feasible to obtain. She also presented the Division's suggestions for outreach to the 650 small water systems that have not yet applied for available waivers.

Ms. Sewall's data showed that to take maximum advantage of the flexibility offered by EPA through waivers, the Division would need an appropriation of \$1,603,195 for an additional 19 positions. The expected savings flowing from the waiver that would be obtained would be approximately \$3,636,137 annually. The additional personnel would be involved with field inspections, investigations of regional chemical use, water sample collections, source protection and evaluation, programming, and education and training of water system operators regarding waiver availability. The Committee extensively discussed the relative advantages of contracting with private industry to obtain the waivers compared with doing the work in-house.

Ms. Sewall also addressed the question of assisting the remaining small water systems that might be able to take advantage of the waivers currently available. Her materials note that 1,900 of 2,660 small systems have obtained waivers. Of those remaining, 264 have already completed the quarterly testing requirement and have no need for the waivers. Another 235 have failed to submit any samples for analysis and are out of compliance with the State and federal rules and are not eligible for waivers until they take the first sample. There remains, therefore, 261 small systems that could benefit from additional assistance. Ms. Sewall noted that DEH believed that the workshops and mailings already provided have helped many to understand the waiver process. However, she thought that the N.C. Rural Water Association might be helpful in providing individual assistance to the remaining water systems operators. This could be done for approximately \$50 per system or a total of 13,050.

Several persons spoke during the meeting of their dissatisfaction with the existing waiver program. Among those who had not received the full benefits of the waiver program were Joyce Vick, President, Multicounty Mobile Home Park Owners Association, Cindy Kirby, and Mrs. Novie Dupree of Franklin County. Among other concerns raised by these individuals was



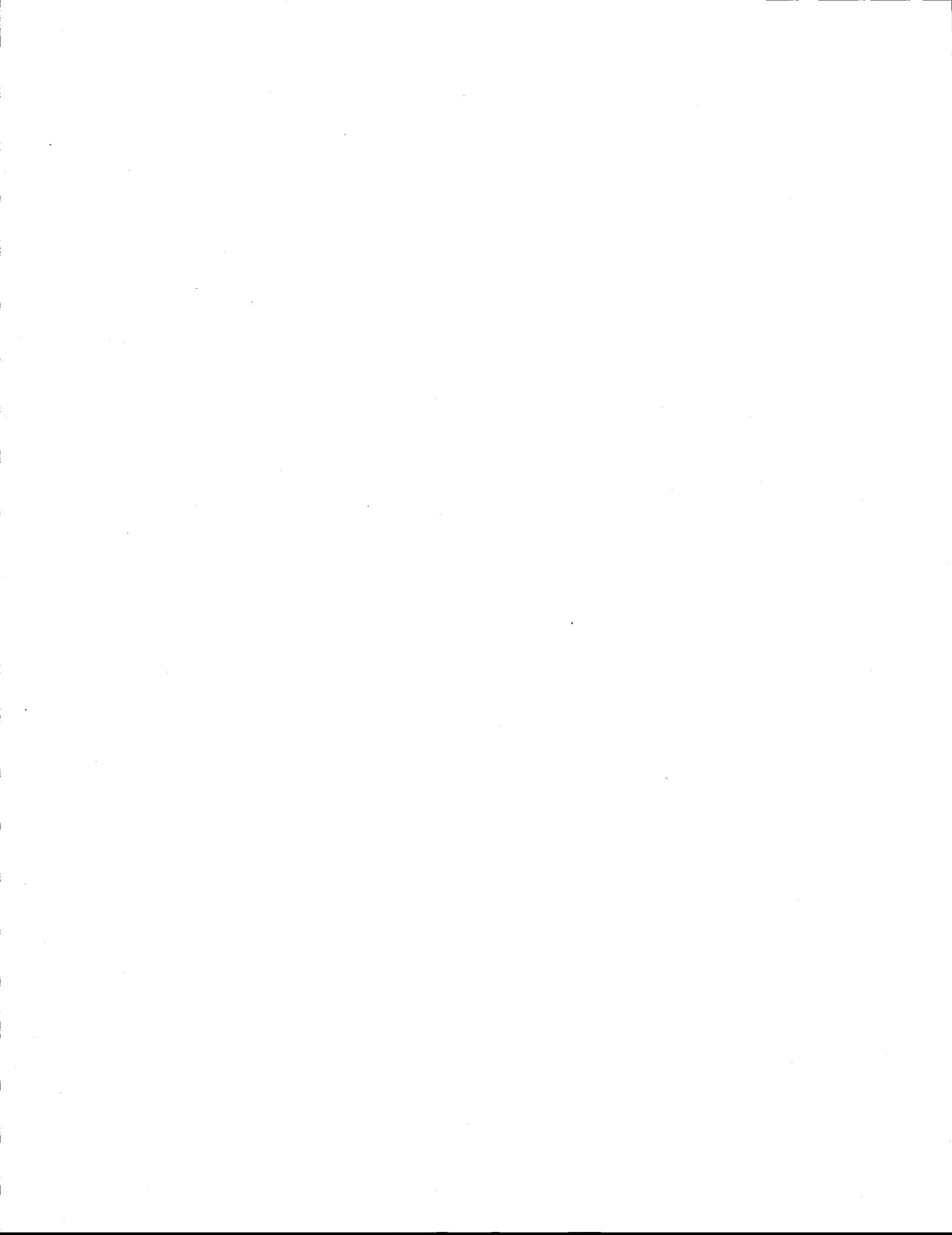
the question of whether the State's drinking water program was stricter than the federal mandates. Staff was directed to do an independent evaluation of the State and federal rules and report back to the Committee.

Cochairman Allred placed before the Committee proposed legislation directing DEH to develop maximum rates that private labs could charge for required drinking water tests. After considerable discussion, the Committee decided not to pursue that option further.

The Committee concluded its meeting with a discussion of its proposed report to the Legislative Research Commission. Staff was directed to prepare a report with recommendations that DEH continue to pursue waiver within available funds and should review its rules to ensure that its drinking water program did not exceed the federal requirements.

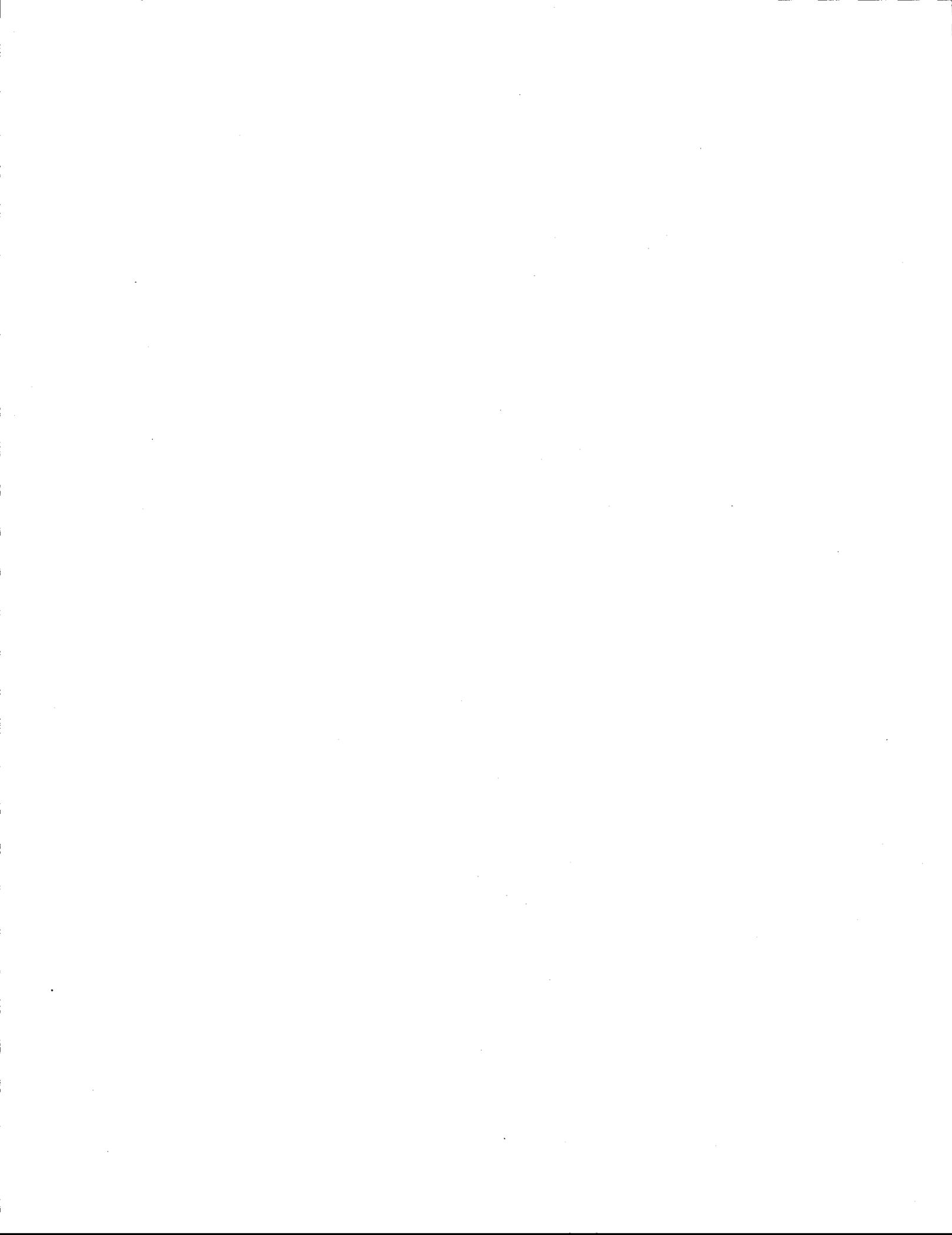
*April 22, 1996*

The Committee met on April 22, 1996 to review the proposed report to the Legislative Research Commission. The Committee heard again from Mr. A.J. Holt who expressed his concern with the amount of regulation to which small water system operators are subjected. After extensive discussion, the Committee voted to accept the report and forward it to the LRC for consideration at its May 1, 1996 meeting. The Committee agreed to continue looking for ways to provide relief to small water systems when the Committee resumes its deliberations in the fall.



## FINDINGS AND RECOMMENDATIONS

1. *The Committee finds that the federal SDWA mandates are excessive, unreasonable, and expensive. The State, through its drinking water program should not add to that burden. The Committee therefore recommends that the General Assembly enact legislation that prohibits the Health Services Commission from adopting drinking water standards and testing requirement in excess of the federal regulations promulgated by EPA. See Legislative Proposal I, **A BILL TO BE ENTITLED AN ACT TO PROVIDE THAT NO STATE RULE REGULATING DRINKING WATER STANDARDS AND TESTING MAY BE MORE RESTRICTIVE THAN THE FEDERAL LAW.**)*
2. *The Committee finds that the cost of complying with the federal SDWA requirements places an undue burden on the small water supply systems. Although costs have been substantially reduced through the obtaining of waivers from EPA, not all small systems have taken advantage of this cost saving mechanism available to them. To ensure that none of the small water systems eligible for waivers fail to apply because of uncertainty of their applicability or the complexity of the application process, the Committee recommends that the General Assembly appropriate \$425,000 from the General Fund to DEH for the purpose of providing small water system operators additional assistance in obtaining waivers. DEH shall consider contracting with the N.C. Rural Water Association as a cost effective approach to providing this assistance. See Legislative Proposal II, **A BILL TO BE ENTITLED AN ACT TO APPROPRIATE FUNDS TO THE DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES TO FUND THE DIVISION OF ENVIRONMENTAL HEALTH TO PROVIDE ASSISTANCE TO SMALL WATER SUPPLY SYSTEMS TO OBTAIN AVAILABLE SUSCEPTIBILITY WAIVERS FROM CERTAIN DRINKING WATER TESTS UNDER THE NORTH CAROLINA SAFE DRINKING WATER ACT.***
3. *The Committee finds that the waivers offered by EPA to the states present a major cost saving opportunity for the small water systems in the State. Waivers obtained to date have significantly reduced the cost of water testing. Estimates by DEH indicate that the cost saving for the first three year cycle, 1995 through 1998, to be in excess of \$12,000,000. The Committee therefore recommends that the General Assembly enact legislation appropriating \$425,000 to DEH to expedite the process of obtaining all drinking water standard waivers available to the State. DEH shall consider the cost effectiveness of contracting with private industry for the services required to obtain additional waivers. See Legislative Proposal III, **AN BILL TO BE ENTITLED AN ACT TO APPROPRIATE FUNDS TO THE DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES TO FUND THE DIVISION OF ENVIRONMENTAL HEALTH TO IMPLEMENT A WAIVER PROGRAM FOR CERTAIN DRINKING WATER TESTS.***







## APPENDIX A

### CHAPTER 542

AN ACT TO AUTHORIZE STUDIES BY THE LEGISLATIVE RESEARCH COMMISSION, TO CREATE AND CONTINUE VARIOUS COMMISSIONS, TO DIRECT STATE AGENCIES AND LEGISLATIVE OVERSIGHT COMMITTEES AND COMMISSIONS TO STUDY SPECIFIED ISSUES, TO MAKE VARIOUS STATUTORY CHANGES, AND TO MAKE TECHNICAL CORRECTIONS TO CHAPTER 507 OF THE 1995 SESSION LAWS.

The General Assembly of North Carolina enacts:

#### PART I.-----TITLE

Section 1. This act shall be known as "The Studies Act of 1995".

#### PART II.-----LEGISLATIVE RESEARCH COMMISSION

Sec. 2.1. The Legislative Research Commission may study the topics listed below. When applicable, the 1995 bill or resolution that originally proposed the issue or study and the name of the sponsor is listed. The Commission may consider the original bill or resolution in determining the nature, scope, and aspects of the study. The topics are:

- (22) Water issues:
- a. Water issues (S.B. 95 - Albertson; H.B. 46 - Ives)
  - b. Drinking water tests (H.B. 930 - Allred)
  - c. Water conservation measures to reduce consumption (Sherron)

Sec. 2.8. Committee Membership. For each Legislative Research Commission committee created during the 1995-96 biennium, the cochairs of the Legislative Research Commission shall appoint the committee membership.

Sec. 2.9. Reporting Dates. For each of the topics the Legislative Research Commission decides to study under this act or pursuant to G.S. 120-30.17(1), the Commission may report its findings, together with any recommended legislation, to the 1996 Regular Session of the 1995 General Assembly, if approved by the cochairs, or the 1997 General Assembly, or both.

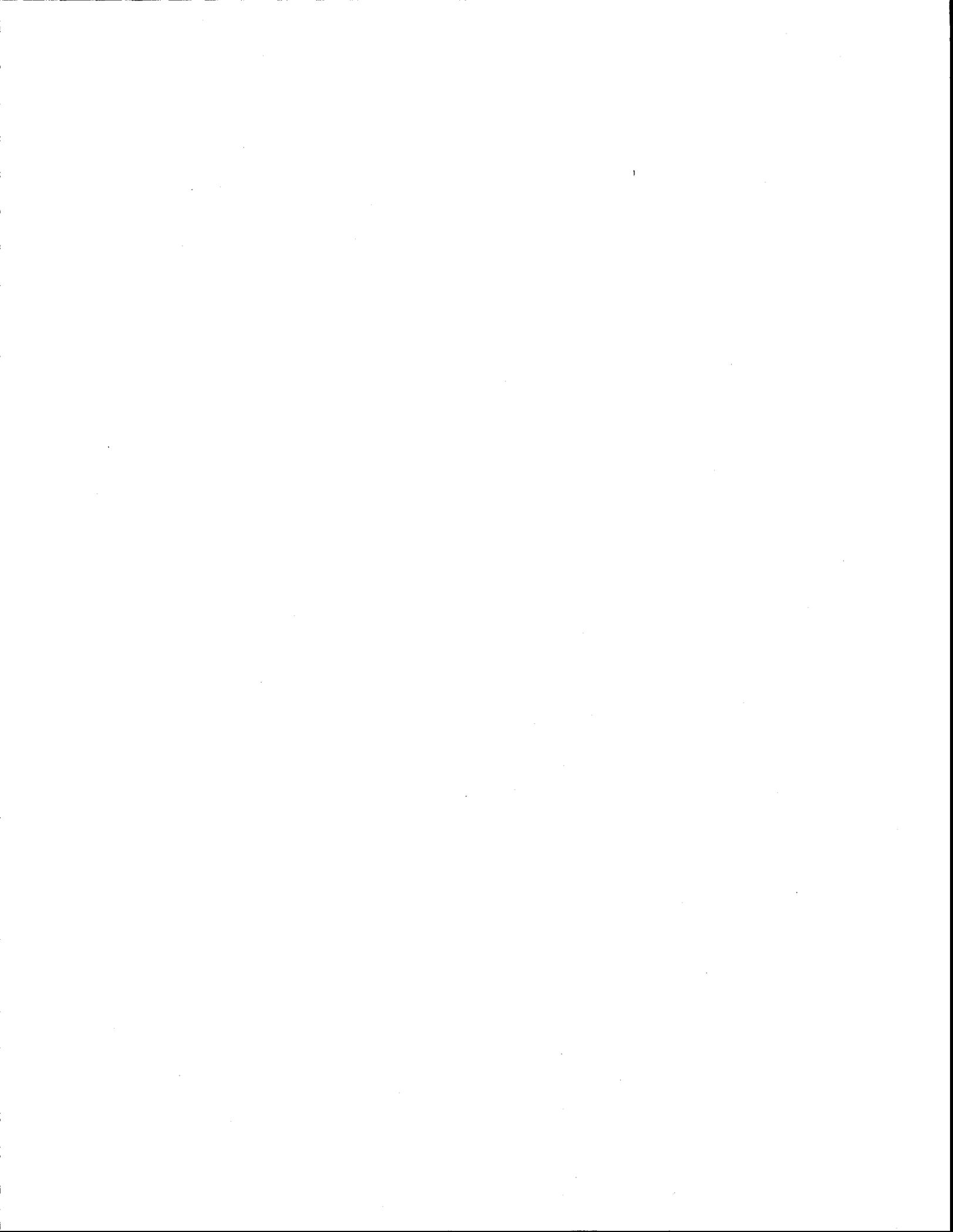
Sec. 2.10. Bills and Resolution References. The listing of the original bill or resolution in this Part is for reference purposes only and shall not be deemed to have incorporated by reference any of the substantive provisions contained in the original bill or resolution.

Sec. 2.11. Funding. From the funds available to the General Assembly, the Legislative Services Commission may allocate additional monies to fund the work of the Legislative Research Commission....

Sec. 21.3. The Commission may develop, among other proposals, a plan for the orderly privatization of designated services and functions.

Sec. 21.4. The Commission shall submit a final report of its findings and recommendations to the 1997 General Assembly by filing the report with the President Pro Tempore of the Senate and the Speaker of the House of Representatives on or before January 15, 1997. The Commission may also submit an interim report of its findings and recommendations to the 1996 Regular Session of the 1995 General Assembly by filing the report with the President Pro Tempore of the Senate and the Speaker of the House of Representatives on or before May 15, 1996. Upon filing its final report to the 1997 General Assembly, the Commission shall terminate.

Sec. 21.5. The Commission, while in the discharge of official duties, may exercise all the powers



provided for under the provisions of G.S. 120-19, and G.S. 120-19.1 through G.S. 120-19.4. The Commission may meet at any time upon the joint call of the cochairs. With the approval of the Legislative Services Commission, the Commission may meet in the Legislative Building or the Legislative Office Building.

Sec. 21.6. Members of the Commission shall receive per diem, subsistence and travel expenses at the rates authorized by law.

Sec. 21.7. The Commission may contract for professional, clerical, or consultant services as provided by G.S. 120-32.02. The Legislative Services Commission, through the Legislative Administrative Officer, shall assign professional staff to assist in the work of the Commission. The House of Representatives' and the Senate's Supervisor of Clerks shall assign clerical staff to the Commission, upon the direction of the Legislative Services Commission. The expenses relating to clerical employees shall be borne by the Commission.

Sec. 21.8. Upon request by the Commission or its staff, a State department or agency, a local government, or a subdivision of either shall furnish the Commission with any information in its possession or available to it.

Sec. 21.9. The Legislative Services Commission may allocate funds to the Commission for the study authorized under this Part....

#### PART XXVI.-----EFFECTIVE DATE

Sec. 26.1. This act is effective upon ratification.



GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1995

S

1

SENATE JOINT RESOLUTION 95

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Sponsors: Senators Albertson; Blackmon and Carpenter.

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Referred to: Appropriations.

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January 31, 1995

1 A JOINT RESOLUTION AUTHORIZING THE LEGISLATIVE RESEARCH  
2 COMMISSION TO STUDY WATER ISSUES.

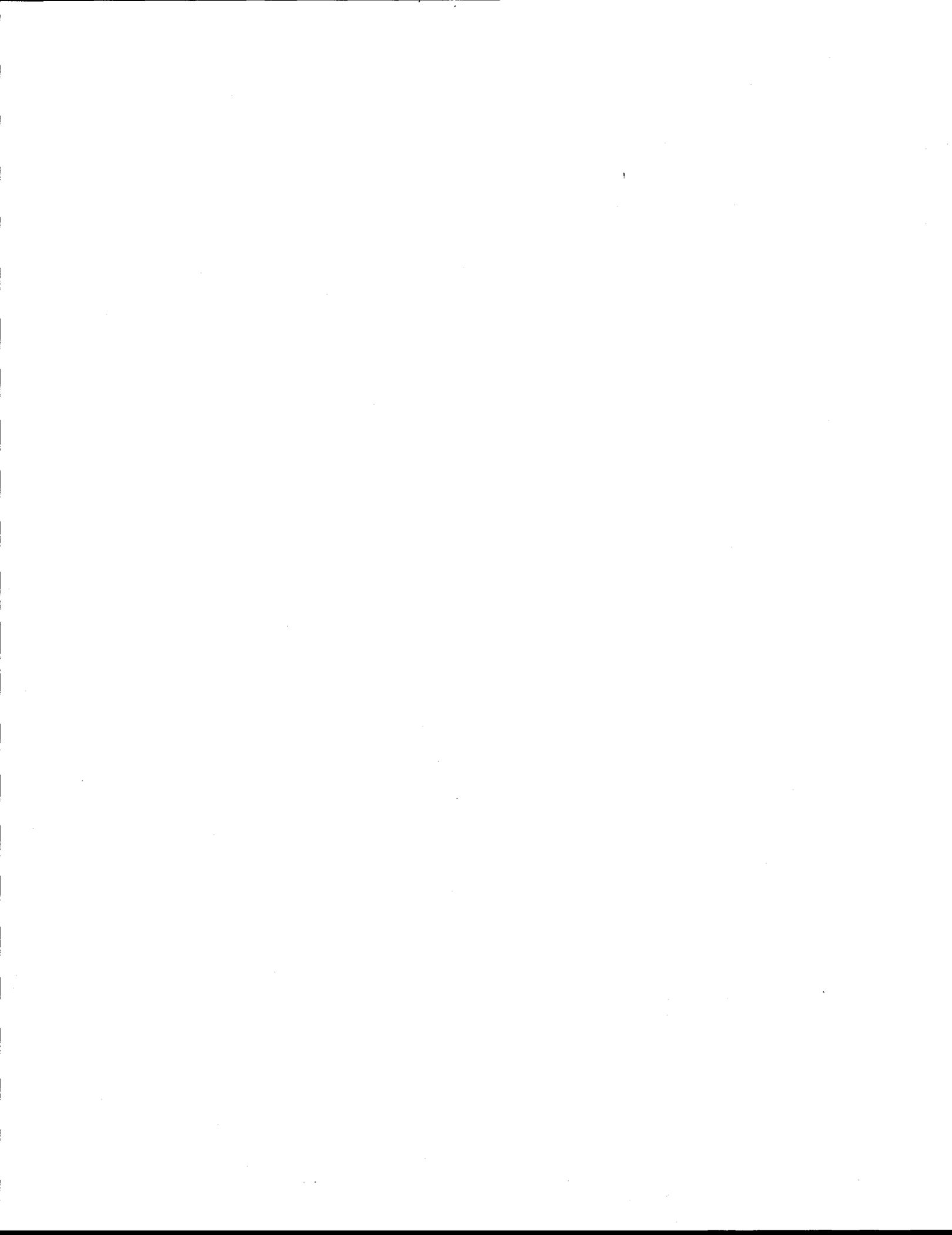
3 Be it resolved by the Senate, the House of Representatives concurring:

4           Section 1. The Legislative Research Commission may study issues  
5 relating to surface water and groundwater including the following: watershed  
6 protection, federal and State testing and monitoring requirements for drinking water  
7 supplies, and the possibility of reclaiming wastewater and using that reclaimed water  
8 as appropriate for applications that do not require drinking water supplies. The  
9 Commission may further study any other issues relevant to the State's water  
10 resources.

11           Sec. 2. The Legislative Research Commission may make its  
12 recommendations and submit an interim report to the 1995 General Assembly,  
13 Regular Session 1996, and may make a final report to the 1997 General Assembly.

14           Sec. 3. This resolution is effective upon ratification.







GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1995

H

1

HOUSE JOINT RESOLUTION 46

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Sponsors: Representatives Ives.

---

Referred to: Rules, Calendar, and Operations of the House.

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January 30, 1995

1 A JOINT RESOLUTION AUTHORIZING THE LEGISLATIVE RESEARCH  
2 COMMISSION TO STUDY WATER ISSUES.

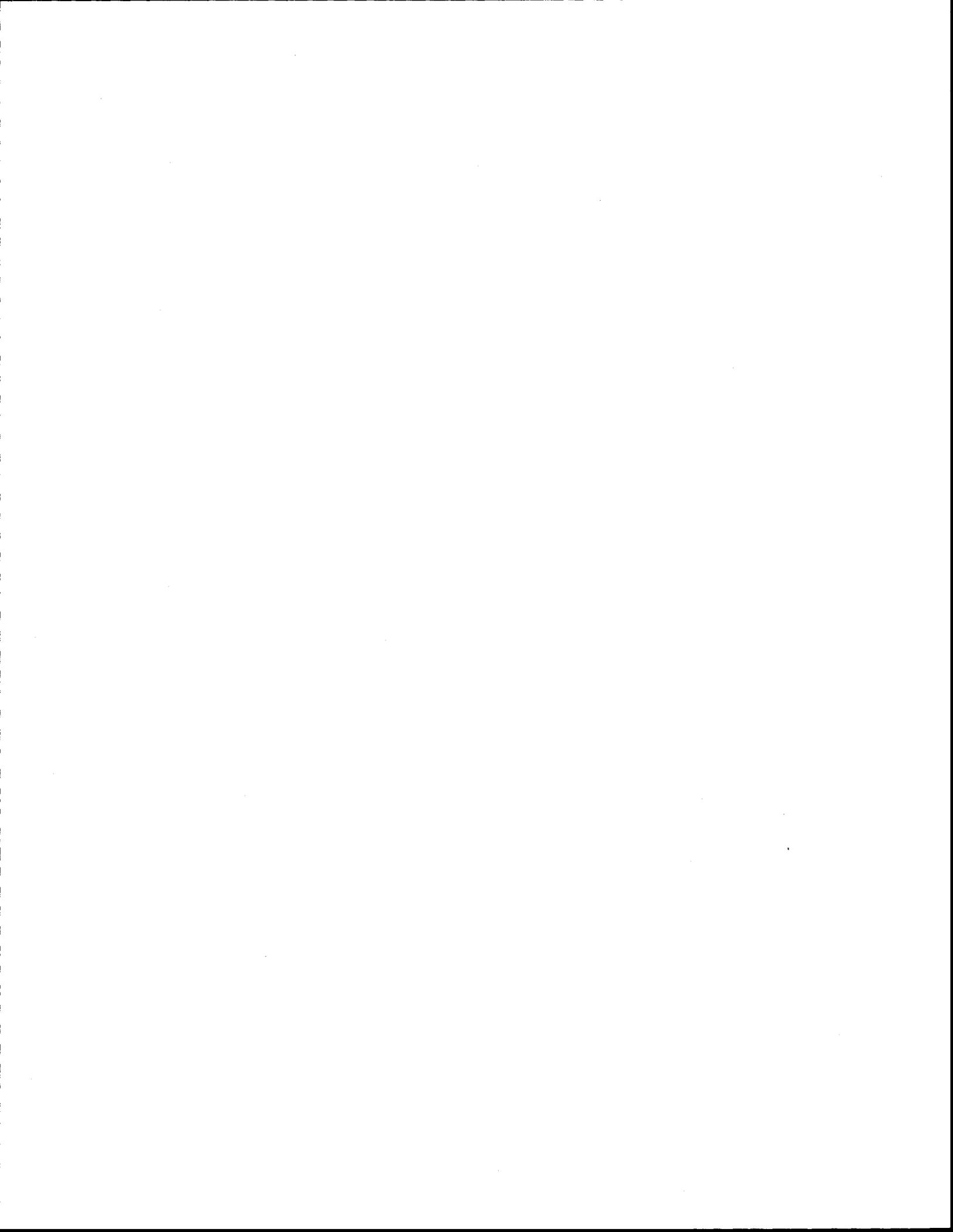
3 Be it resolved by the Senate, the House of Representatives concurring:

4           Section 1. The Legislative Research Commission may study issues  
5 relating to surface water and groundwater including the following: watershed  
6 protection, federal and State testing and monitoring requirements for drinking water  
7 supplies, and the possibility of reclaiming wastewater and using that reclaimed water  
8 as appropriate for applications that do not require drinking water supplies. The  
9 Commission may further study any other issues relevant to the State's water  
10 resources.

11           Sec. 2. The Legislative Research Commission may make its  
12 recommendations and submit an interim report to the 1995 General Assembly,  
13 Regular Session 1996, and may make a final report to the 1997 General Assembly.

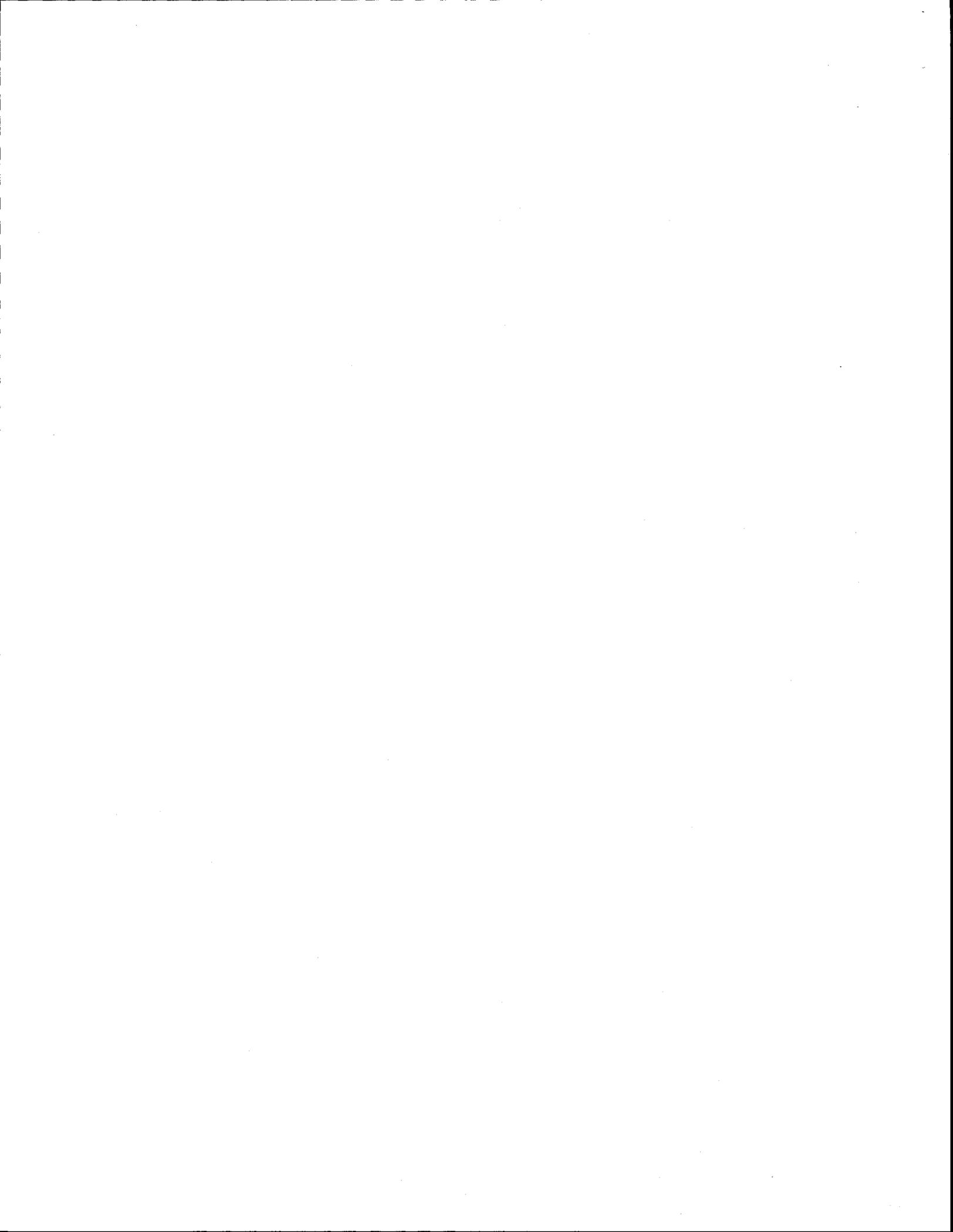
14           Sec. 3. This resolution is effective upon ratification.

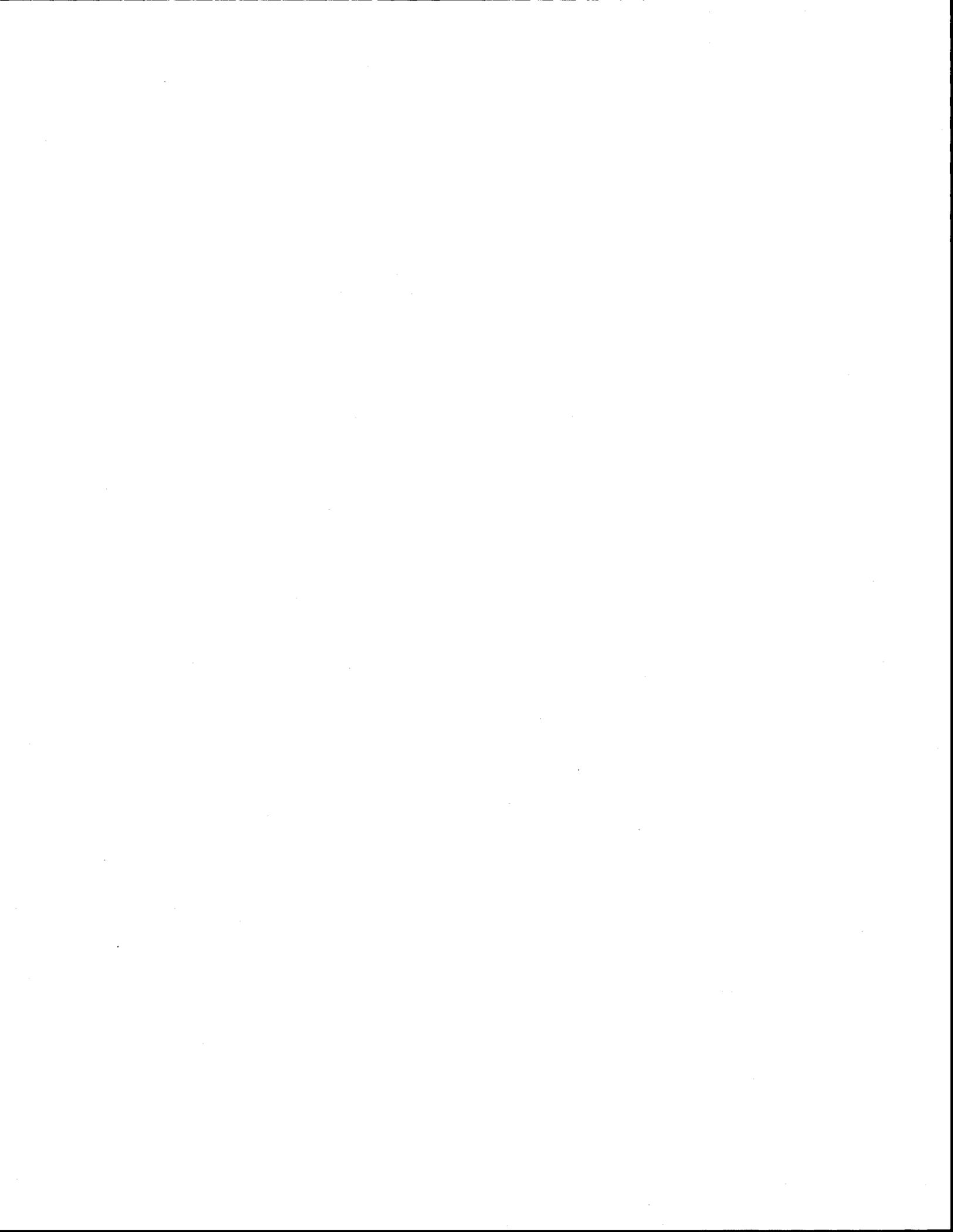


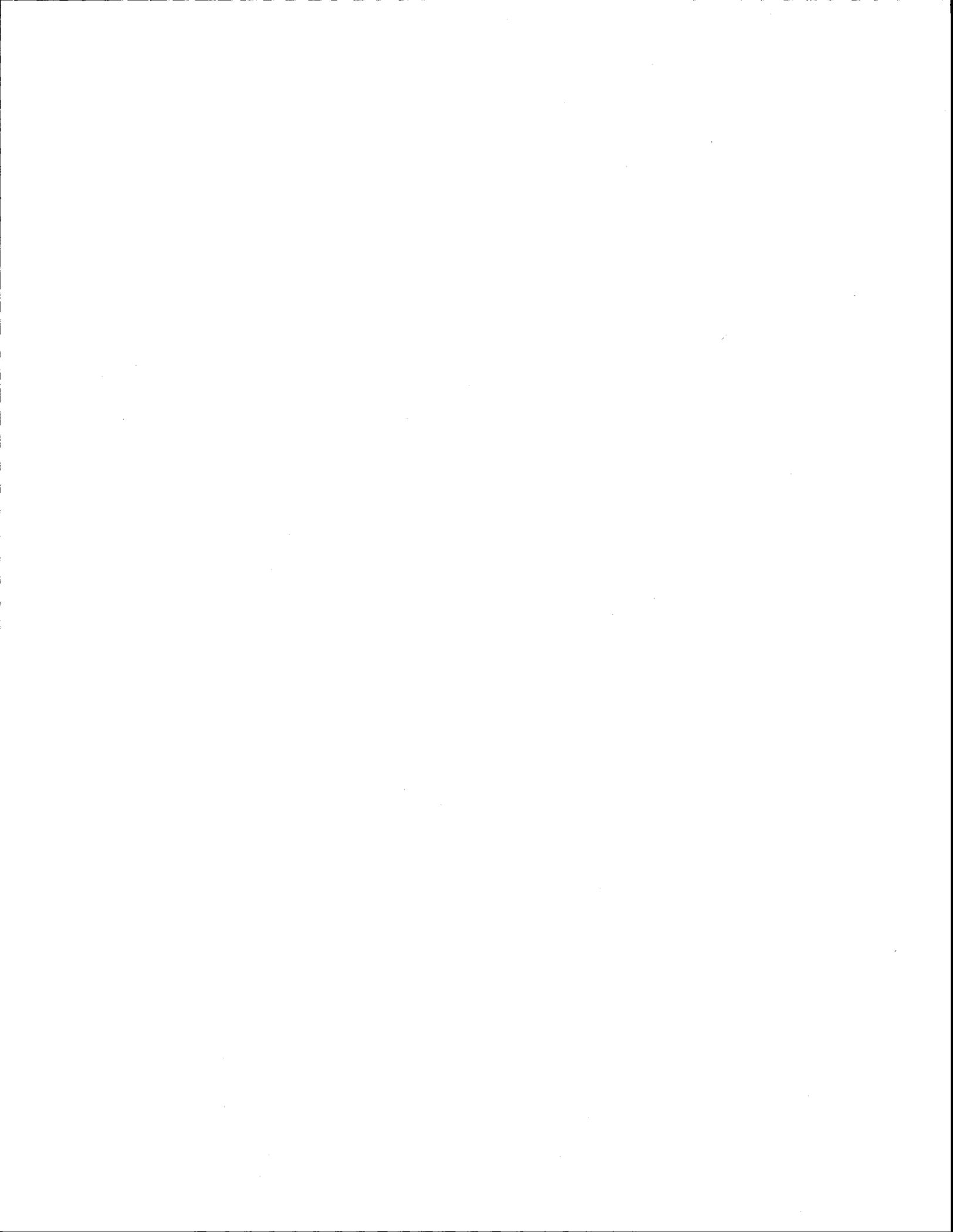












**APPENDIX B**

**WATER ISSUES COMMITTEE  
MEMBERSHIP  
1995 - 1996**

**LRC Member:** Sen. Henry E. McKoy  
5300 Applegate Court  
Raleigh, NC 27609  
(919) 787-2927

**President Pro Tempore Appointments**

Sen. James D. Speed, Cochair  
Route 6, Box 542  
Louisburg, NC 27549  
(919) 853-2167

Mr. Melvin Daniels  
1618 Rochelle Drive  
Box 346  
Elizabeth City, NC 27907

Mrs. Frankie Harvey  
PO Box 110  
Rich Square, NC 27869

Mr. Vernon James  
Route 4, Box 251  
Elizabeth City, NC 27909

Sen. Donald P. Kincaid  
PO Box 988  
Lenoir, NC 28645  
(704) 758-8521

Sen. R.L. Martin  
126 Nelson Street  
PO Box 387  
Bethel, NC 27812  
(919) 825-4361

**Staff:**

Ms. Mona Moon  
Fiscal Research Division  
(919) 733-4910

Ms. Barbara Riley  
Research Division  
(919) 733 2578

**Speaker's Appointments**

Rep. Cary D. Allred, Cochair  
4307 Sartin Road  
Union Ridge  
Burlington, NC 27217-7522  
(910) 229-1980

Rep. Arlie F. Culp  
8521 US Hwy 64 East  
Ramseur, NC 27316  
(910) 824-2218

Rep. Howard J. Hunter, Jr.  
PO Box 506  
Murfreesboro, NC 27855  
(919) 398-5630

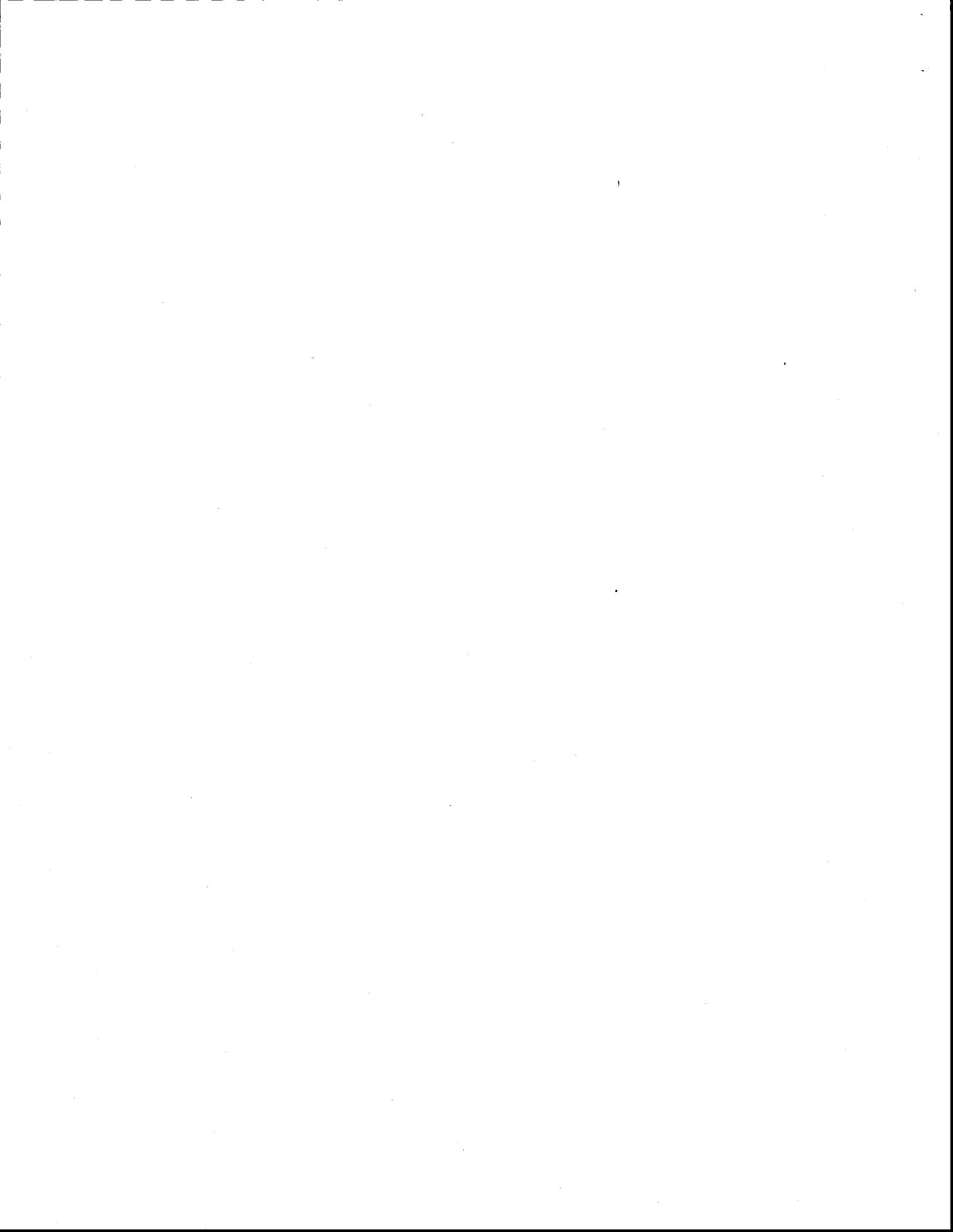
Rep. William M. Ives  
PO Box 829  
Brevard, NC 28712  
(704) 884-4458

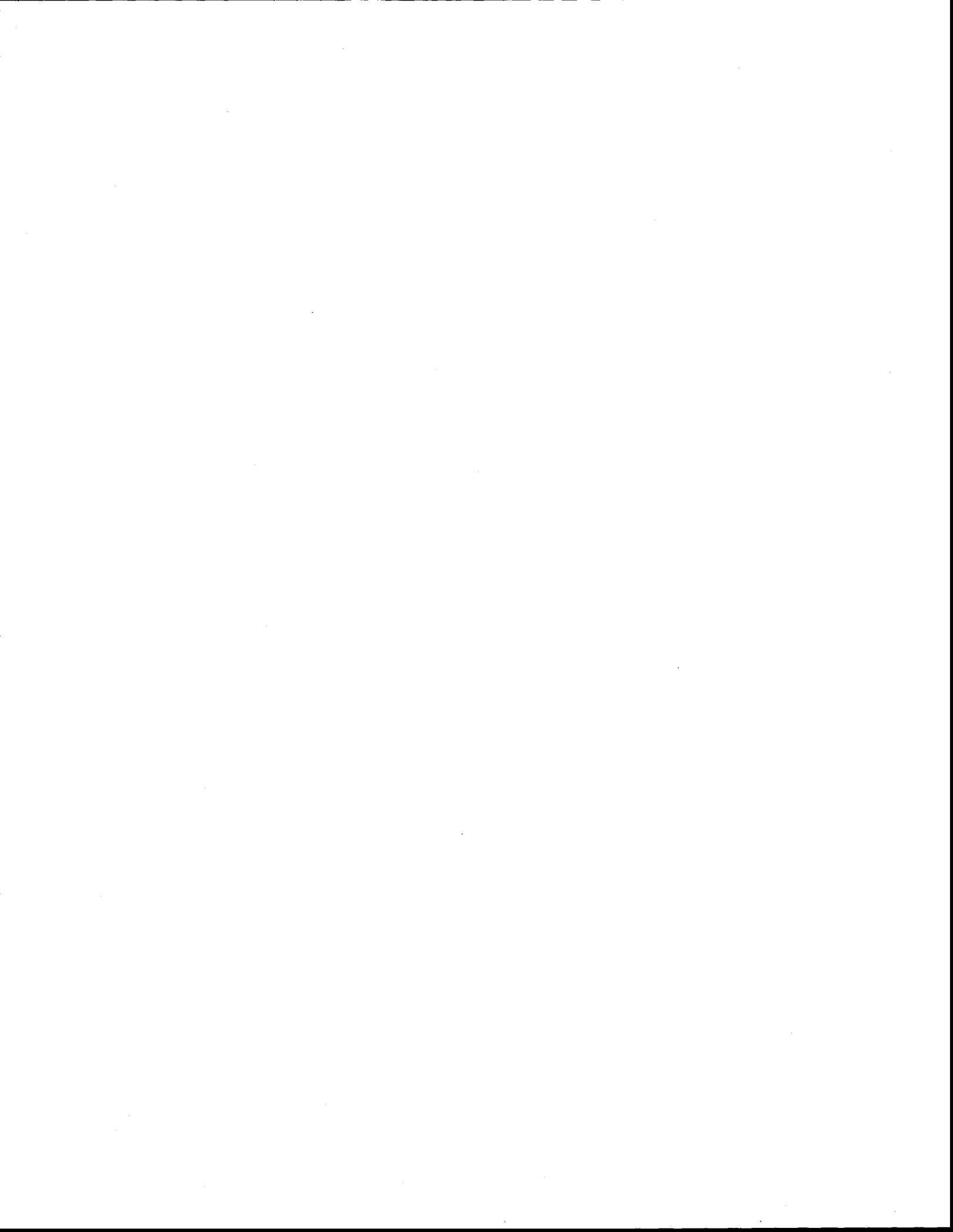
Rep. W. Franklin Mitchell  
734 Olin Road  
Olin, NC 28660  
(704) 876-4327

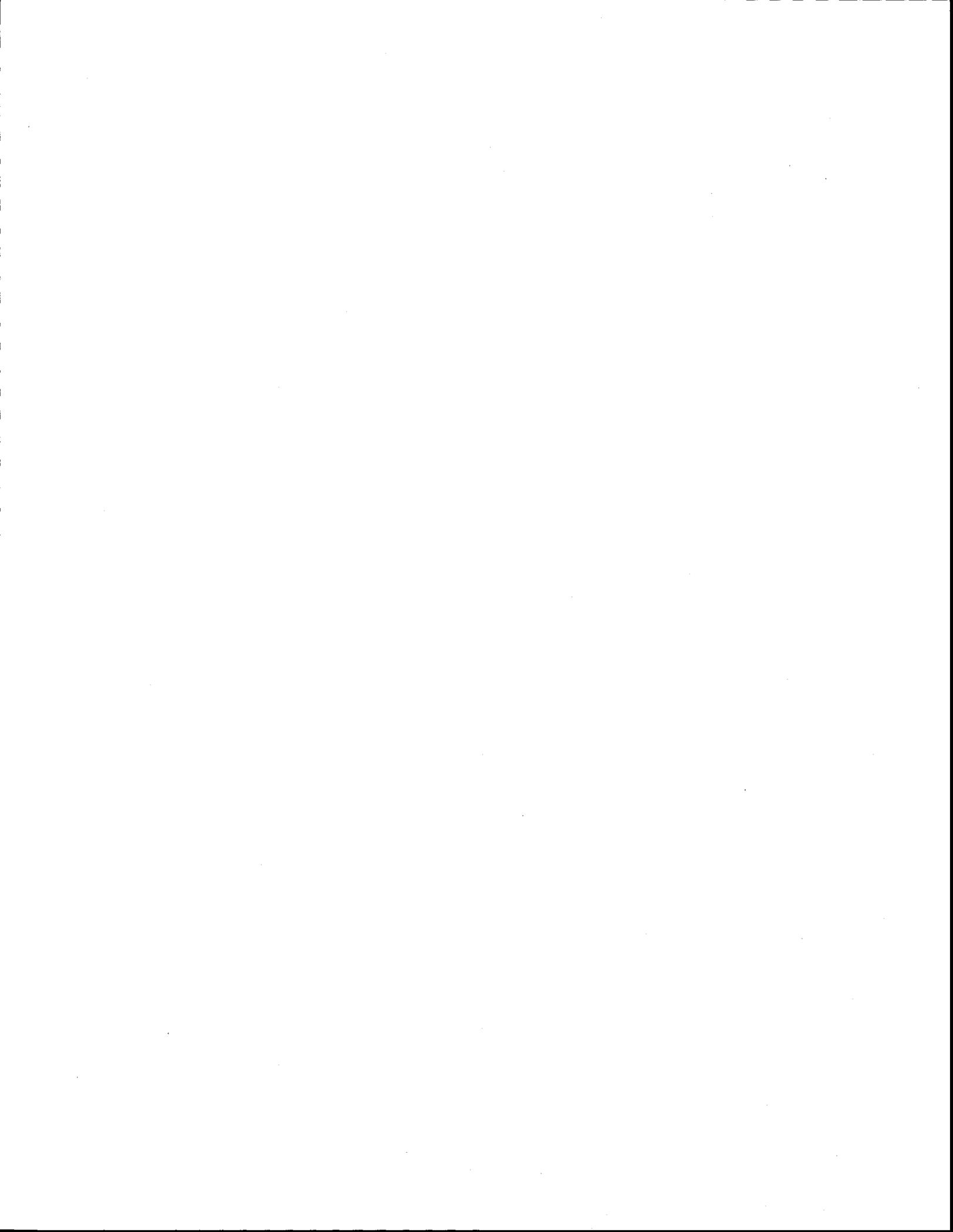
Rep. E. Norris Tolson  
Route 1, Box 222  
Pinetops, NC 27864  
(919) 827-4639

**Clerk:**

Ms. Jane M. Bagley  
(919) 733-5653







# Cost of Drinking Water Analyses for Three Year Period Beginning 1996

## Small Water Systems\*

Analysis	Required Testing Frequency	Total Number of Tests per 3 Years	Total Cost per 3 Years		
			Avg Cost of Commercial Labs	Avg Cost of Southeastern States	NC Public ** Health Lab
SOC	1 per three years	1	742.50	1008.19	450.00
VOC	1 per three years	1	148.00	77.46	70.00
Inorganics	1 per three years	1	258.60	226.05	135.00
Lead & Copper ***	5 per three years	5	720.83	479.69	500.00
Total Coliform	Monthly	36	798.00	316.98	540.00
Nitrate	Annually	3	49.00	50.50	45.00
THMs	Annually	3	141.00	206.43	105.00
<b>Total</b>			<b>\$2,357.03</b>	<b>\$2,365.28</b>	<b>\$1,845.00</b>
<b>Average Annual Cost per System</b>			<b>\$785.68</b>	<b>\$788.43</b>	<b>\$615.00</b>
<b>Average Monthly Cost per System</b>			<b>\$262.89</b>	<b>\$262.81</b>	<b>\$205.00</b>

\* Assumptions: system < 500 population; 1 entry point; initial testing completed on schedule with no detections or violations; all waivers and reduced monitoring received.

\*\* Based on February 27, 1996 estimate

\*\*\* 5 samples required for each test

CI

APPENDIX C

## Legislative Research Commission Water Issues Committee

### Summary of Commercial Laboratories' Drinking Water Analysis Charges \*\*

# Labs	Analysis	Avg Price/Sample *	Range	
4	SOC	742.50	700.00	760.00
5	VOC	148.00	125.00	180.00
5	Inorganics	258.60	200.00	296.00
6	Lead & Copper	28.83	26.00	30.00
6	Total Coliform	22.17	13.00	30.00
6	Nitrate	16.33	12.00	25.00
6	Nitrite	15.17	10.00	25.00
5	THMs	47.00	40.00	50.00

\* charges have not been adjusted for discounts that may be offered

\*\* revised to include price list for 1 additional commercial laboratory and to separate charges for the Nitrate and Nitrite analyses.

## Legislative Research Commission Water Issues Committee

### Summary of Commercial Laboratories' Drinking Water Analysis Charges \*\*

# Labs	Analysis	Avg Price/Sample *	Range	
4	SOC	742.50	700.00	760.00
5	VOC	148.00	125.00	180.00
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6	Lead & Copper	28.83	26.00	30.00
6	Total Coliform	22.17	13.00	30.00
6	Nitrate	16.33	12.00	25.00
6	Nitrite	15.17	10.00	25.00
5	THMs	47.00	40.00	50.00

\* charges have not been adjusted for discounts that may be offered

\*\* revised to include price list for 1 additional commercial laboratory and to separate charges for the Nitrate and Nitrite analyses.





**Legislative Research Commission  
Water Issues Committee**

**Overview of Southeastern States**

**Comparison of SDWA Compliance Charges**

Test Group	Alabama	Arkansas	Florida	N. Carolina	Texas	Minimum	Maximum	Average
SOC		1048.20	975.00	450.00	1205.00	804.54	1205.00	1008.19
VOC		95.45	20.00	70.00	63.00	63.00	95.45	77.46
Inorganics		235.19	215.00	135.00	331.00	123.01	331.00	226.05
Lead & Copper		NA	20.00	20.00	15.00	15.00	21.93	19.19
Total Coliform		10.02	10.00	15.00	NA	4.48	15.72	8.81
Nitrate/Nitrite		22.35	10.00	15.00	12.00	10.00	23.49	16.83
THMs		95.45	10.00	35.00	36.00	36.00	95.45	68.81

**Total Number of Water Systems (FY1995)**

	Alabama	Arkansas	Florida	N. Carolina	Texas
Community	697		2189	2637	
NTNC	184		657	665	
TNC	185		3787	6126	
<b>Total</b>	<b>6731</b>		<b>6922</b>	<b>9428</b>	

 EPA Region IV State  
 NTNC Non-transient Non-community  
 TNC Transient Non-community

**Legislative Research Commission  
Water Issues Committee**

**Overview of Southeastern States**

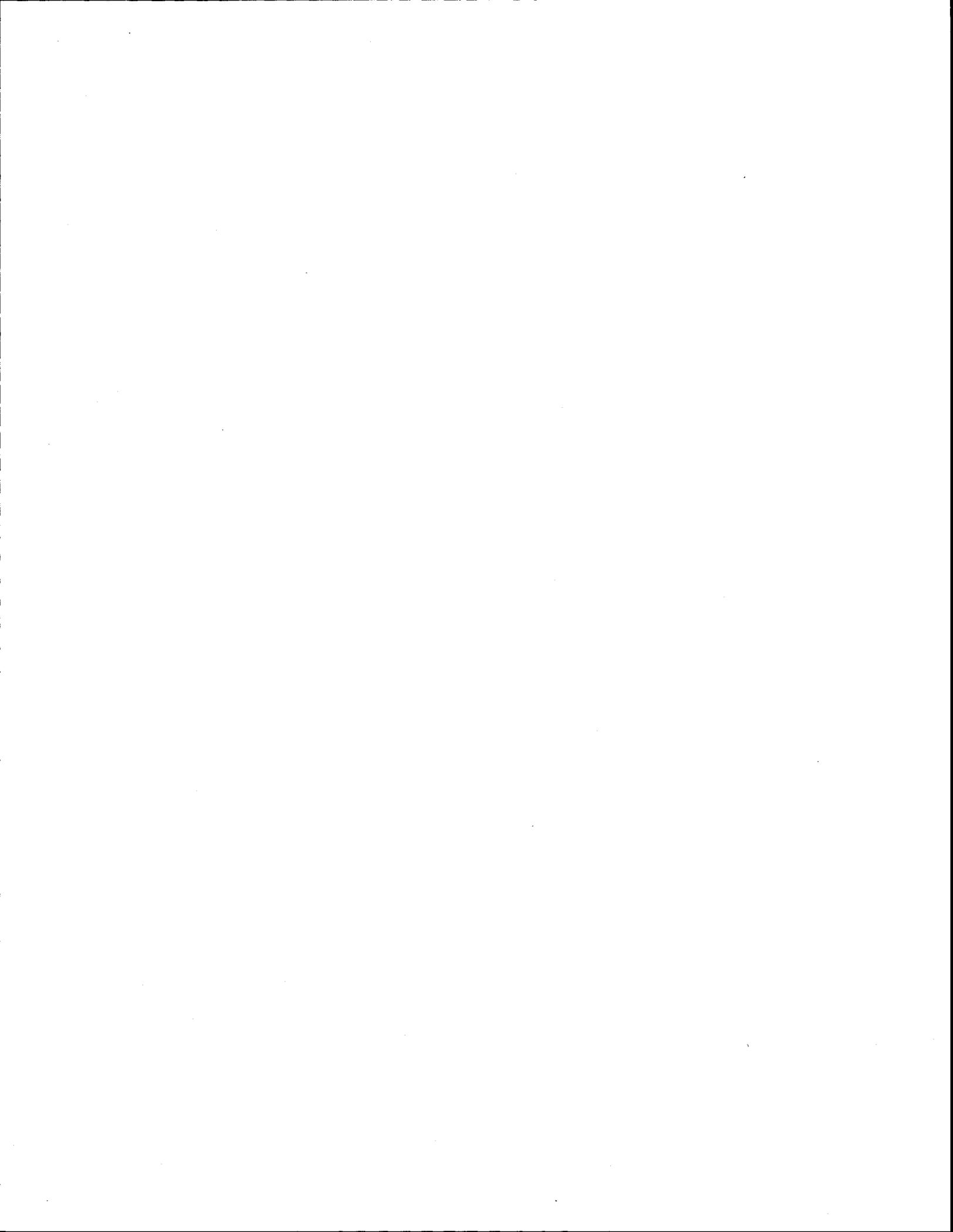
**Comparison of SDWA Compliance Charges**

Test Group	Alabama	Arkansas	Florida	Georgia	N. Carolina	South Carolina	Texas	Virginia	Minimum	Maximum	Average
SOC		1048.20	874.00		450.00		1205.00		804.54	1205.00	1008.19
VOC		95.45	24.00		70.00		63.00		63.00	95.45	77.46
Inorganics		235.19	26.00		135.00		331.00		123.01	331.00	226.05
Lead & Copper		NA	21.00		20.00		15.00		15.00	21.93	19.19
Total Coliform		10.02	0.00		15.00		NA		4.48	15.72	8.81
Nitrate/Nitrite		22.35	10.00		15.00		12.00		10.00	23.49	16.83
THMs		95.45	1.00		35.00		36.00		36.00	95.45	68.81

**Total Number of Water Systems (FY1995)**

	Alabama	Arkansas	Florida	Georgia	N. Carolina	South Carolina	Texas
Community	897		2188		2837		
NTNC	153		157		665		
TNC	100		3787		6128		
Total	1150		6922		9428		

 EPA Region IV State  
 NTNC Non-transient Non-community  
 TNC Transient Non-community



**COST RECOVERY SCHEDULE FOR SDWA COMPLIANCE WORK  
AT THE  
NORTH CAROLINA STATE LABORATORY OF PUBLIC HEALTH**

<b>PARAMETER</b>	<b>AMOUNT NEEDED TO RECOVER COSTS</b>	<b>#TESTS<sup>1</sup> YEARLY</b>	<b>YEARLY RECEIPTS</b>
COLIFORM	\$ 15	60,000	\$840,000
INORGANIC PACKAGE	135	1,500	202,500
LEAD & COPPER	20	8,000	160,000
NITRATE	15	10,000	150,000
VOLATILE ORGANICS (VOCs)	70	3,000	210,000
TRICHALOMETHANE (THMs)	35	4,000	140,000
SYNTHETIC ORGANIC CHEM (SOCs)	450	2,000	900,000
RADIOCHEMISTRY	50	700	35,000
	<b>TOTAL<sup>2,3,4</sup></b>		<b>\$2,637,500</b>

<sup>1</sup> Revised Estimate by Division of Environmental Health, February 1996

<sup>2</sup> July 1995 Salary Schedule

<sup>3</sup> Changes include: Contract for regional coliform labs, indirect costs, computer support position, clerk-typist, additional postage

<sup>4</sup> Assumes set-up cost of \$1.4MM

<sup>5</sup> Radiochemistry costs/fees unchanged

<b>OVERALL SUMMARY OF MARGINAL COSTS TO ASSUME PWS COMPLIANCE WORK</b>
------------------------------------------------------------------------

**RECURRING EXPENSES**

PERSONNEL (21 Positions)	\$623,029	
INDIRECT COSTS	168,328	
LABORATORY SUPPLIES	593,998	
OFFICE SUPPLIES	15,000	
POSTAGE	203,280	
EQUIPMENT REPAIR	105,000	
TELEPHONE	3,000	
COMPUTER SUPPORT	10,000	
TRAVEL & ANALYST TRAINING	25,000	
CONTRACT LAB	260,000	
<b>TOTAL RECURRING COST</b>		<b>\$2,006,635</b>

**ONE TIME START UP COSTS**

NEW EQUIPMENT	\$1,110,500	
BUILDING RENOVATION	250,000	
<b>TOTAL ONE TIME COST</b>		<b>1,360,500</b>

<b>GRAND TOTAL</b>	<b>\$3,367,135</b>
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OVERALL SUMMARY OF MARGINAL COSTS TO ASSUME PWS COMPLIANCE WORK
-----------------------------------------------------------------

**RECURRING EXPENSES**

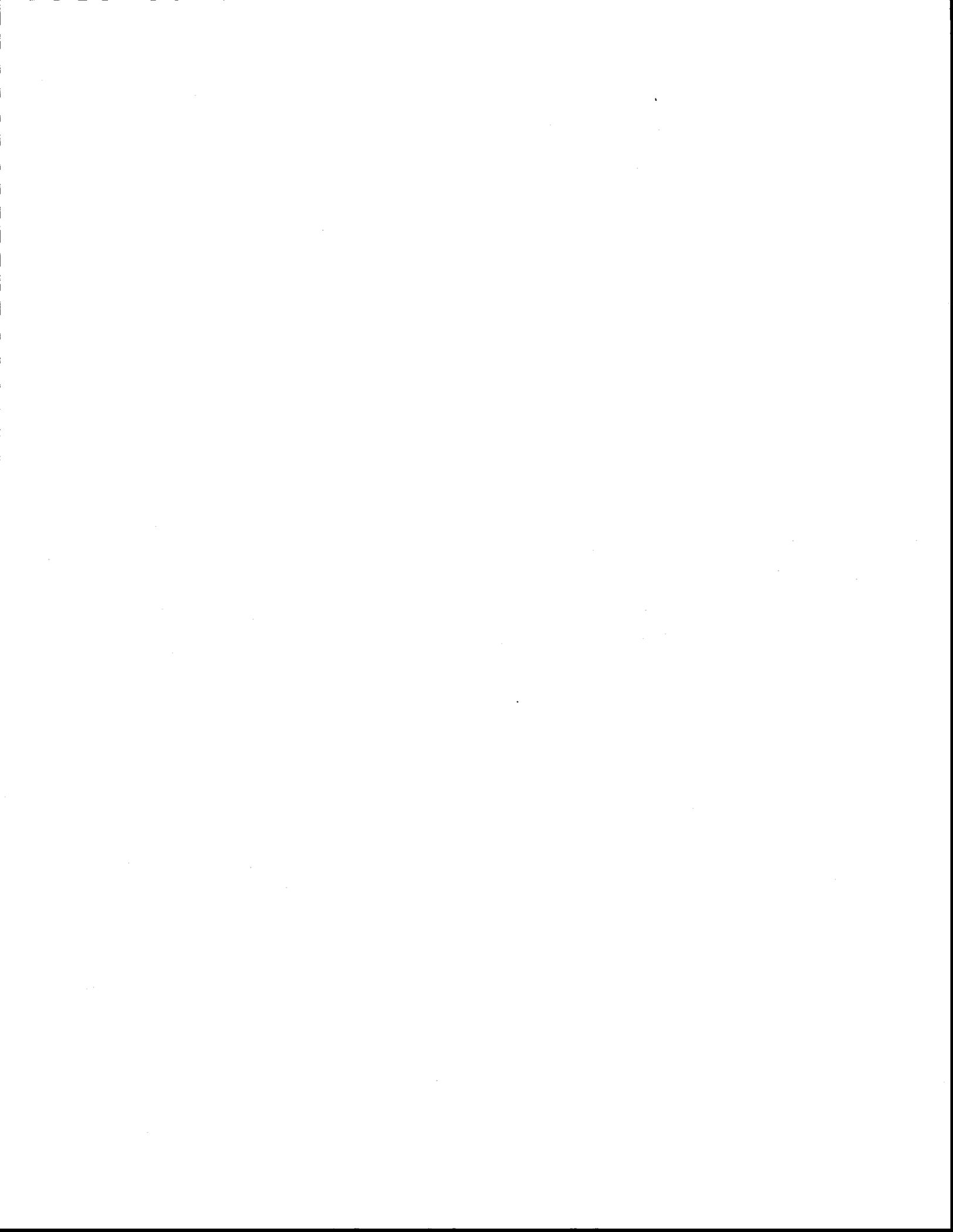
PERSONNEL (21 Positions)	\$623,029	
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NEW EQUIPMENT	\$1,110,500	
BUILDING RENOVATION	250,000	
<b>TOTAL ONE TIME COST</b>		<b>1,360,500</b>

GRAND TOTAL

\$3,367,135



## APPENDIX C

**POLICY STATEMENT**  
**ON**  
**NORTH CAROLINA'S WAIVER IMPLEMENTATION**  
**for PESTICIDES/SYNTHETIC ORGANIC CHEMICALS(SOCS)/PCBS MONITORING**

Federal and state drinking water regulations (Phase II/V) require a ground water-supplied public water system to test each entry point (well) for pesticides/synthetic organic chemicals (SOCs), and polychlorinated biphenyls (PCBs) quarterly for one year at a cost of approximately \$1000 per entry point per quarter. After the initial year of monitoring, the sampling for small systems may be reduced to a minimum of every three years if no regulated contaminants are detected.

Because of the financial burden this monitoring places on the small water systems of North Carolina, the Public Water Supply Section developed a waiver program that was approved by EPA Region IV on June 14, 1994. This program gives ground water systems serving fewer than 3301 people that perform one quarter of monitoring and complete a vulnerability risk assessment the opportunity to reduce their monitoring. The vulnerability risk assessment examines potential contamination sources, source protection, well construction and depth, environmental fate of contaminants, elevated nitrate levels at the source, and the use of PCBs in the water system's equipment.

To obtain a waiver, water systems must collect one quarterly sample (waiver sample) for each of pesticides, SOCs/PCBs and nitrate. The analytical results with the vulnerability risk assessment are then submitted to the Public Water Supply Section for review. If the analyses of the pesticides/SOCs/PCBs waiver samples are below the detection limit and the nitrate level is below 5 milligrams per liter (mg/l), water systems may obtain a waiver to reduce their monitoring from four quarterly samples to once annually or once every three years, depending on the source vulnerability.

Systems that have conducted waiver sampling with no detects and are in the process of completing a waiver application (or have already submitted an application for review) are considered to be automatically applying for a waiver. The applications may be submitted through December 31, 1995. Such a system will not be required to conduct additional sampling during this monitoring period. Systems are encouraged to submit their applications as early as possible to quicken the review process.

Any system that has not conducted its first quarter of monitoring and has not received an approved waiver from the state by December 31, 1995 will be required to conduct quarterly sampling according to federal regulations.

This policy is an effort to maximize opportunities for water systems to reduce monitoring through waivers.

# Organic Waiver Summary

(as of Sep 5, 1995)

	Number of systems being issued a waiver	Number of entry points being issued a waiver	Number of analyses being reduced over a 3 year period (1993-1995)	Unit price for analysis	Money saved during the 3 years (1993-1995)	Additional money saved during the next 3 years (1996-1998)
<b>Pesticides/SOCs/PCBs waiver issued<sup>(1)</sup></b>						
to monitor once every three years	799	1206	3	\$1,000	\$3,618,000	none
to monitor annually	709	787	1	\$1,000	\$787,000	none
to monitor quarterly for the detected contaminant(s)	186	215	none	\$200	\$172,000	none
<b>Dioxin waiver issued<sup>(2)</sup></b>	3,000 <sup>(3)</sup>	4,200 <sup>(4)</sup>	4	\$450	\$7,560,000	\$1,890,000
<b>Total Saving</b>					\$12,137,000	\$1,890,000

(1) Water systems must apply for the waiver to the State. Systems serving more than 3300 population were not eligible for the waiver.

(2) Water systems serving fewer than 3,301 population were granted a waiver automatically.

(3) Estimated number

(4) Based on the estimation that there is 1.4 entry point per system

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# Organic Waiver Summary

(as of Sep 5, 1995)

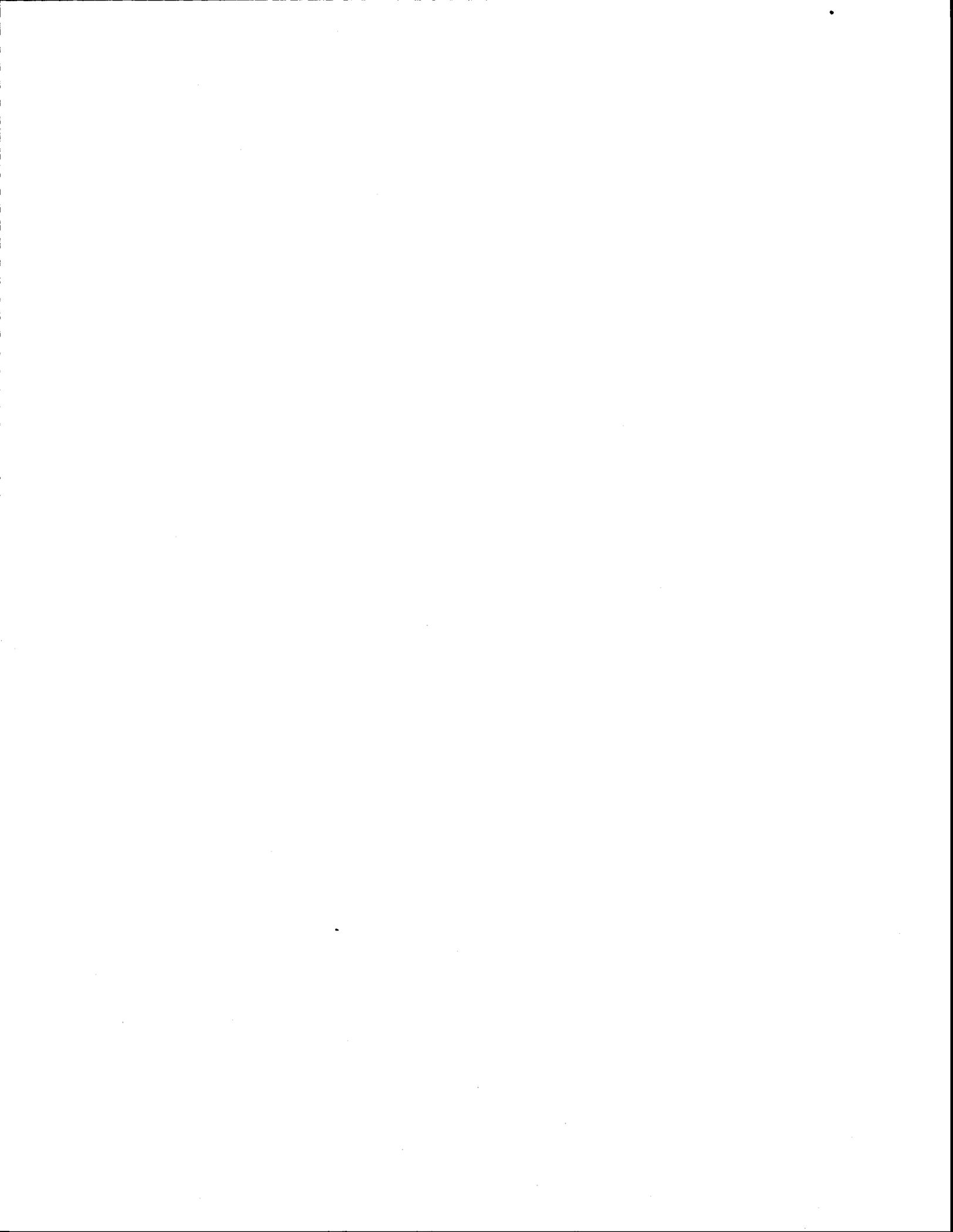
	Number of systems being saved by waiver	Number of entry points being saved by waiver	Number of analyses being reduced over 3 years period (1993-1995)	Unit price for analysis	Money saved during the 3 years (1993-1995)	Additional money saved during the 3 years (1996-1998)
<b>Pesticides/SOCs/PCBs waiver issued<sup>(1)</sup></b>						
to monitor once every three years	799	1206	3	\$1,000	\$3,618,000	none
to monitor annually	709	787	1	\$1,000	\$787,000	none
to monitor quarterly for the detected contaminant(s)	186	215	none	\$200	\$172,000	none
<b>Dioxin waiver issued<sup>(2)</sup></b>	3,000 <sup>(3)</sup>	4,200 <sup>(4)</sup>	4	\$450	\$7,560,000	\$1,890,000
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(1) Water systems must apply for the waiver to the State. Systems serving more than 3300 population were not eligible for the waiver.

(2) Water systems serving fewer than 3,301 population were granted a waiver automatically.

(3) Estimated number

(4) Based on the estimation that there is 1.4 entry point per system



6

**PRESENTATION TO THE WATER ISSUES STUDY COMMITTEE**  
April 1, 1996

At the last Water Issues Study Committee Meeting the Committee asked the Department of Environment, Health and Natural Resources to address 3 questions.

1. What additional monitoring requirements of the Safe Drinking Water Act can be waived?
2. How much would a program to maximize the waivers available to North Carolina's small public water systems cost to implement?
3. How can the state help small water systems that may be eligible for Pesticides/SOCs/PCBs waivers, apply if they have not already done so?

Attachment 1 indicates the three types of contaminants for which monitoring can be reduced or waived. They are divided into 3 major groups; Inorganic chemicals, organic chemicals and microbials. The type of staff work involved with determining whether waivers can be issued either on a system specific, regional or statewide basis varies from one contaminant group to another. Therefore the costs associated with each type of waiver vary.

Attachment 2 indicates the costs of maximizing each type of waiver and the estimated savings to North Carolina's small water system if the program was fully implemented. The estimated savings are based on the assumption that all of the small systems receive waivers. The cost for implementing all of the waivers is less than the total of the three types because some of the administrative costs would not need to be duplicated.

The state already has an approved waiver program that allows small systems to reduce the sampling frequency for Pesticides/SOCs/PCBs from quarterly to once every year or once every 3 years if an initial sample is free of contamination and if a completed waiver application form indicates that the systems well(s) are not vulnerable to contamination. So far 1900 of the 2660 eligible small systems have applied for and received these waivers. Since 264 of the remaining systems have already completed the 4 quarterly tests, they have no need for the waivers. This leaves 496 systems that may be eligible if they complete the initial sample and the application form. Approximately 235 of the systems have not yet taken their initial sample and therefore are in violation of the monitoring requirements. Until they take their initial sample, they cannot apply for a waiver. This leaves approximately 261 systems that may require additional assistance.

The state has already held a number of workshops to teach water supplier show to apply for these waivers. Since most eligible suppliers have already applied, it appears that more individualized assistance will be needed if we are to involve the remaining suppliers in the program. Our existing field staff will assist these suppliers in the program as they visit them to conduct sanitary surveys. However, the sanitary survey program only allows public water supply section staff to visit each system every 3 years. Therefore, it may take up to 3 years before all eligible systems will be helped.

Other options include contracting with an outside group such as the North Carolina Rural Water Association to visit the approximately 261 remaining systems and help them to complete the application form. The state would provide the Rural Water Association with a list of eligible systems and contact people. The Rural Water Association has suggested that they could help these systems through a combination of on-site assistance, small seminars and telephone contacts within 6-8 months for approximately \$13,050 (\$50/system).

Other options include contracting with an outside group such as the North Carolina Rural Water Association to visit the approximately 261 remaining systems and help them to complete the application form. The state would provide the Rural Water Association with a list of eligible systems and contact people. The Rural Water Association has suggested that they could help these systems through a combination of on-site assistance, small seminars and telephone contacts within 6-8 months for approximately \$13,050 (\$50/system).



CONTAMINANT	WAIVER PROGRAMS		ADDITIONAL WAIVER NEEDED	MONITORING REDUCTION ALLOWED
	Susceptibility <sup>a</sup>	Use		
<b>SOCs (43 Contaminants)</b>				<b>Susceptibility:</b> Four quarterly samples to one sample for first three years.  <b>Use:</b> One sample annually or one sample every three years to no samples.
Propachlor, Hexachlorobenzene	x		x	
2,3,7,8 - TCDD Dioxin	x	x		
Heptachlor, Heptachlor Epoxide	x		x	
Dieldrin, Butachlor, Lindane, Chlordane	x		x	
Di-2 (ethylhexyl) phthalate	x		x	
Benzo(a)pyrene, Aldrin, PCB's	x		x	
Metribuzin, Alachlor	x		x	
Method 504 (EDB, DBCP)	x	x	x	
Atrazine, Endrin, Metolachlor	x		x	
Di-2 (ethylhexyl) adipate	x		x	
Simazine, Methoxychlor, Toxaphene	x		x	
Hexachlorocyclopentadiene	x		x	
Diquat, Endothal, Glyphosate	x	x		
Method 515.1 (2,4,5 - TP, Pentachlorophenol, Dicamba, 2,4-D, Picloram, Dinoseb, Dalapon)	x x x		x x x	
Method 531.1 (Carbaryl, Carbofuran, Methomyl, Aldicarb Sulfone, Oxamyl, 3-Hydroxycarbofuran, Aldicarb, Sulfoxide Aldicarb)	x x x		x x x	
<b>VOCs (55 Contaminants)</b>			x	One sample every three years to no samples.
<b>INORGANICS (16 Contaminants)</b>	x	n/a	x	One sample every three years to one sample every nine years.
<b>MICROBIAL (Coliform)</b>	x	n/a	x	-Monthly to quarterly -Quarterly to annually -Nine follow-up samples after contamination to on-site investigation.
<b>ASBESTOS</b>	x	x	Undetermined	One sample every nine years to no samples.

**Footnote:**

- a. Applies to groundwater systems serving less than 3301 population
- b. Applies to surface water systems only

## Organics Waivers

NUMBER OF POSITIONS	TITLE	GRADE LEVEL	UNIT SALARY AMOUNT	TOTAL SALARY AMOUNT	SUMMARY AMOUNTS
1	Engineer II	75	45,347	45,347	SALARY: 358,689
3	Engineer I	73	40,551	121,653	FRINGE BENEFITS: 86,085
2	Hydrogeologist II	74	40,551	81,102	OPERATIONAL COSTS: 296,516
1	Programmer/Analysts	76	47,459	47,459	TOTAL COSTS: 741,291
1	GIS Engineer	74	40,551	40,551	
1	Processing Assistant	59	22,577	22,577	TOTAL POSITIONS: 9

TOTAL ANNUAL COSTS OF ORGANIC CHEMICALS WAIVER PROGRAM: \$741,291

TOTAL ANNUAL SAVINGS IN TESTING COSTS FOR SYSTEMS: \$2,065,000<sup>1</sup>

NET BENEFIT: \$1,323,709

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<sup>1</sup>Assumes maximum savings

## Organics Waivers

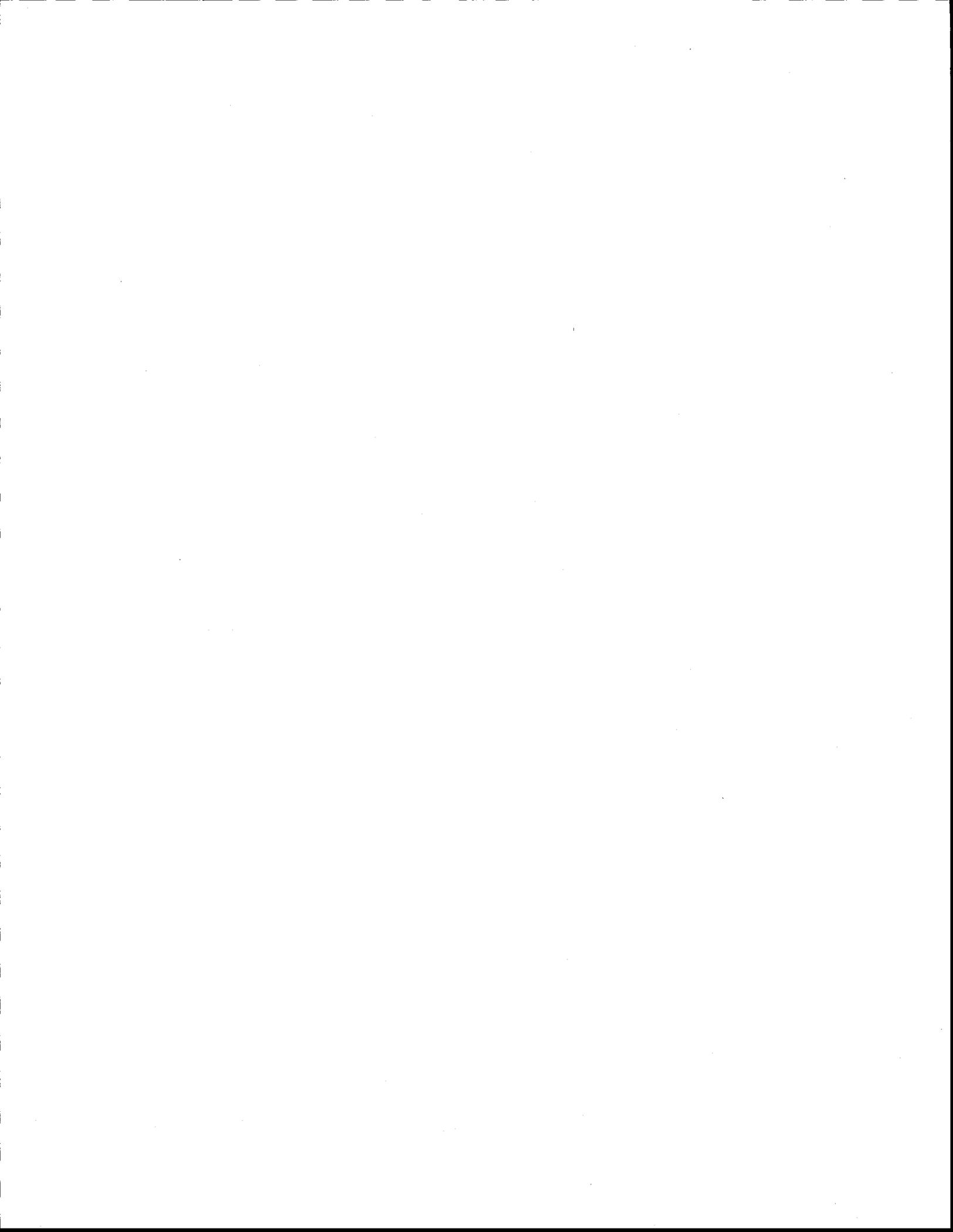
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NET BENEFIT: \$1,323,709

<sup>1</sup>Assumes maximum savings



# Organic Chemicals Waivers Saving

Analysis	Approx. total number of entry points	Estimated Monitoring Frequency ratio one year later	Number of entry point	Average analytical unit cost used	Total cost	Maximum potential annual saving
<b>Pesticides/SOCs</b>	4200					
once every three years		65%	2730	\$750	\$2,047,500	\$682,500
annually		35%	1470	\$750	\$1,102,500	\$1,102,500
<b>VOCs</b>	4200					
once every three years		70%	2940	\$125	\$367,500	\$122,500
annually		30%	1260	\$125	\$157,500	\$157,500
<b>Maximum annual saving :</b>						<b>\$2,065,000</b>

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1. Based on the assumptions that all water systems obtained a use waiver for both VOC and pesticides/SOCs testing, which means no testing is required. The actual annual saving may be significantly less than the maximum saving.

### Example of Saving Calculation for the Pesticides/SOCs Analysis

Total number of entry points estimated : 4200

The percentage of the total entry point achieving reduced monitoring one year later to monitor once every three years : 65%

The unit cost for pesticides/SOCs analysis: \$750

Total cost within 3 three years:  $4200 \times 0.65 \times \$750 = \$2,047,500$

Total annual cost for the pesticides/SOCs analysis :  $\$2,047,500 / 3 = \$682,500$

### Total Maximum Saving Calculation for Organic Chemicals (VOCs & pesticides/SOCs)

$\$682,000 + \$1,102,500 + \$122,500 + \$157,500$	=	$\$2,065,000$
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## Microbial Waivers

NUMBER OF POSITIONS	TITLE	GRADE LEVEL	UNIT SALARY AMOUNT	TOTAL SALARY AMOUNT	SUMMARY AMOUNTS
1	Engineer II	75	45,347	45,347	SALARY: 399,240
7	Engineer I	73	40,551	283,857	FRINGE BENEFITS: 95,818
1	Programmer/Analysts	76	47,459	47,459	OPERATIONAL COSTS: 330,038
1	Processing Assistant	59	22,577	22,577	TOTAL COSTS: 825,096
					TOTAL POSITIONS: 10

TOTAL ANNUAL COSTS OF MICROBIAL WAIVER PROGRAM: \$825,096

TOTAL ANNUAL SAVINGS IN TESTING COSTS FOR SYSTEMS: \$1,384,470<sup>1</sup>

NET ANNUAL BENEFIT: \$559,347

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<sup>1</sup>Assumes maximum savings

## Microbial Waivers

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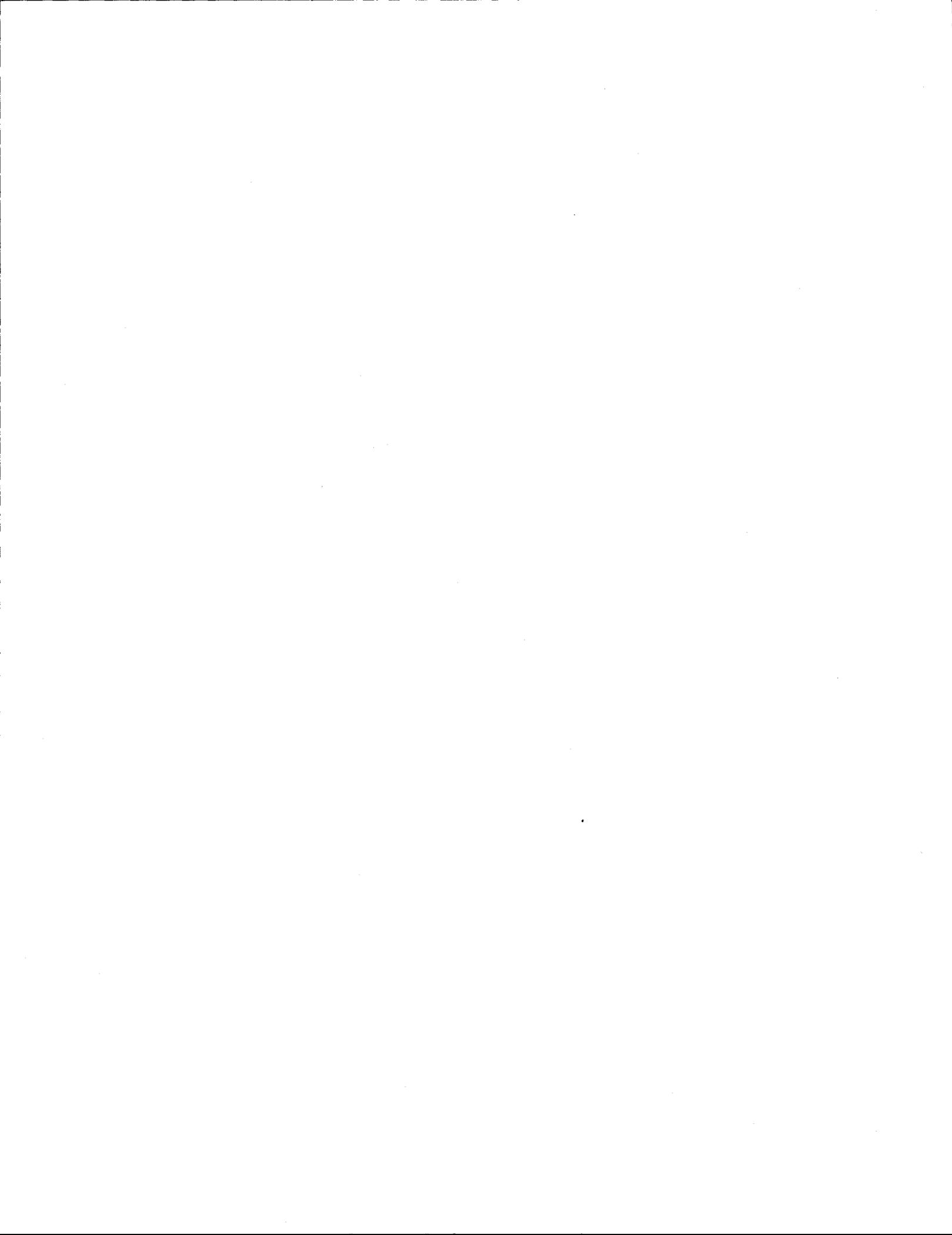
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NET ANNUAL BENEFIT: \$559,347

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<sup>1</sup>Assumes maximum savings



Bacteriological Waivers Savings

Assuming: One initial sample per compliance period

# Community Systems @ 2,554

# Non-Community Systems @ 5,471

@736 positive samples/ year for each group

One complete set of follow-up samples per positive  
Routine compliance sample: 9 total (4 repeats + 5 routines)

\$30.00 per sample

Reductions: Quarterly sampling costs 1/3 that of monthly and annual sampling costs 1/4 of quarterly (1 quarter = 3 months: 4 quarters = 1 year)

System	Present Annual Routine Samples	Present Annual Follow-up Samples	Proposed Annual Routine Samples	Proposed Annual Follow-up Samples
Community	(2544)(12 months)(1 sample)x \$30/sample = \$915,840.00	(736 positives)(9 follow-ups)x \$30 = \$198,720.00	Every quarter or 1/3 present monthly = \$305,280.00	Assuming 1/3 # of follow-ups = \$66,240.00
Non-Community	(5471)(4 qtrs)(1 sample)x \$30/sample = \$656,520.00	(736 positives)(9 follow-ups)x \$30 = \$198,720.00	Once Annually or 1/4 present quarterly = \$164,130.00	Assuming 1/4 # of follow-ups = \$49,680.00

TOTALS:            \$1,572,360.00      \$397,440.00      \$469,410.00      \$115,920.00

SAVINGS:            Routine: \$1,102,950.00            Repeats: \$281,520.00

TOTAL SAVINGS: \$1,384,470.00 annually

## Inorganics Waivers

NUMBER OF POSITIONS	TITLE	GRADE LEVEL	UNIT SALARY AMOUNT	TOTAL SALARY AMOUNT	SUMMARY AMOUNTS
1	Engineer I	73	40,551	40,551	SALARY: 88,010
1	Programmer/Analysts	76	47,459	47,459	FRINGE BENEFITS: 21,122
					OPERATIONAL COSTS: 72,755
					TOTAL COSTS: 181,887

TOTAL ANNUAL COSTS OF INORGANIC CHEMICALS WAIVER PROGRAM: \$181,887

TOTAL ANNUAL SAVINGS IN TESTING COSTS FOR SYSTEMS: \$186,667<sup>1</sup>

NET ANNUAL BENEFIT: \$4,780

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<sup>1</sup>Assumes maximum savings

## Inorganics Waivers

NUMBER OF POSITIONS	TITLE	GRADE LEVEL	UNIT SALARY AMOUNT	TOTAL SALARY AMOUNT	SUMMARY AMOUNTS
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1	Programmer/Analysts	76	47,459	47,459	FRINGE BENEFITS: 21,122
					OPERATIONAL COSTS: 72,755
					TOTAL COSTS: 181,887

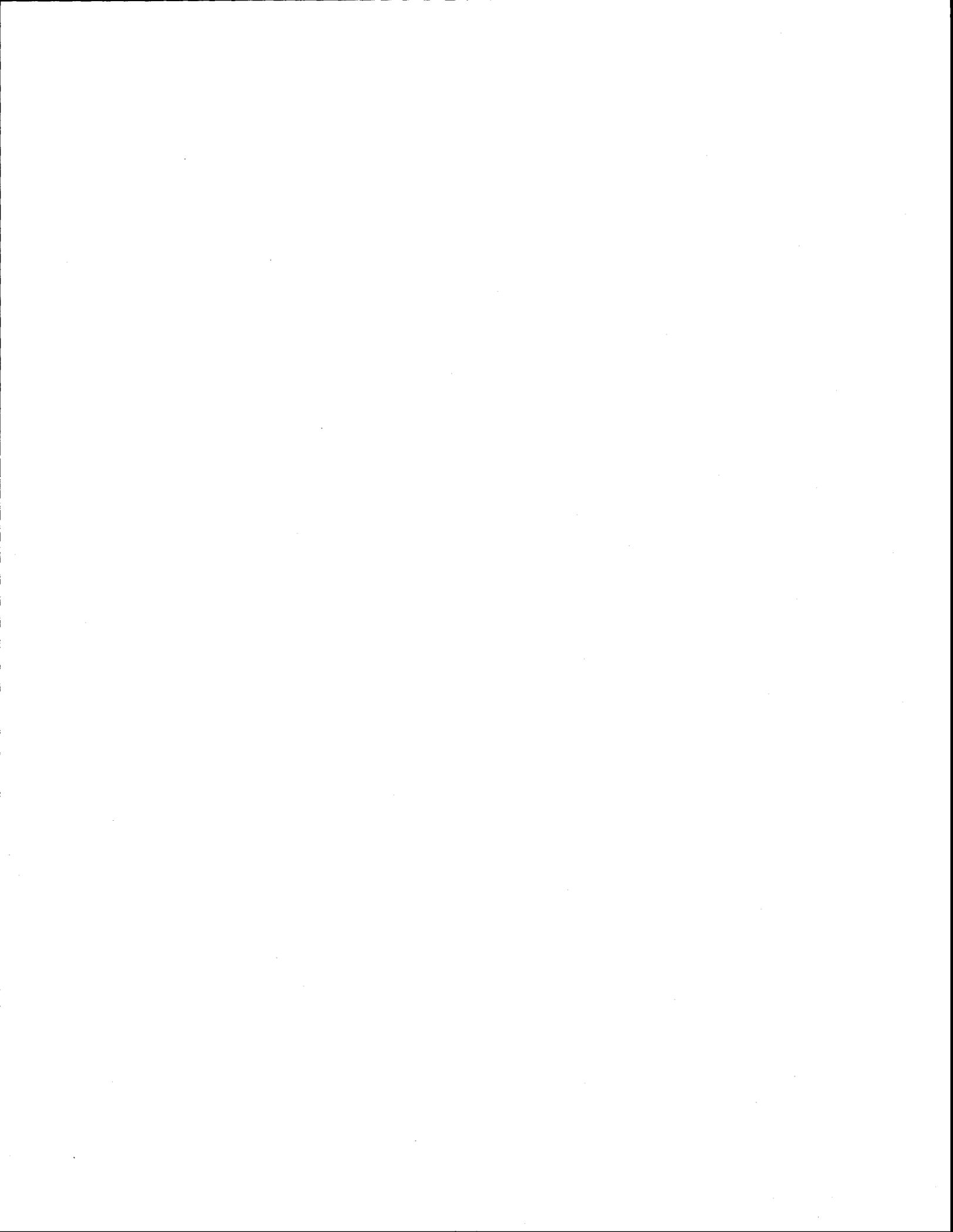
TOTAL ANNUAL COSTS OF INORGANIC CHEMICALS WAIVER PROGRAM: \$181,887

TOTAL ANNUAL SAVINGS IN TESTING COSTS FOR SYSTEMS: \$186,667<sup>1</sup>

NET ANNUAL BENEFIT: \$4,780

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<sup>1</sup>Assumes maximum savings



## **Inorganic Chemicals Waivers Savings**

### **Sampling Points:**

**# Community Systems = 2,471**

**# Non-Transient Non-Community Systems = 628**

**Total # Of Systems = 3,099**

**Total # Of Entry Points = 4,200**

The Inorganic Chemicals Waiver allows one sample per entry point for each 9 year compliance cycle. Sampling without the waiver is one sample at each entry point during each 3 year compliance period. This is a reduction of two samples for each entry point during a 9 year period. The costs of one set of inorganic chemical analyses is approximately \$200.

### **Savings:**

**(4,200 entry points) X (2 sets of tests) X (\$200 per test) = \$1,680,000 every 9 years**

**Savings every 9 years = \$1,680,000**

**Annual savings = \$186,667**

## Combined Waivers Savings

	<b>COSTS</b>	<b>SAVINGS</b>	<b>BENEFITS</b>
<b>Organics Waivers</b>	\$741,219	\$2,065,000	\$1,323,709
<b>Inorganics Waivers</b>	\$181,887	\$186,667	\$4,780
<b>Microbial Waivers</b>	\$821,096	\$1,384,470	\$559,374
<b>Totals</b>	\$1,744,274	\$3,636,137	\$1,887,863
<b>Combined Waivers</b>	\$1,603,195 <sup>1</sup>	\$3,636,137	\$2,032,942

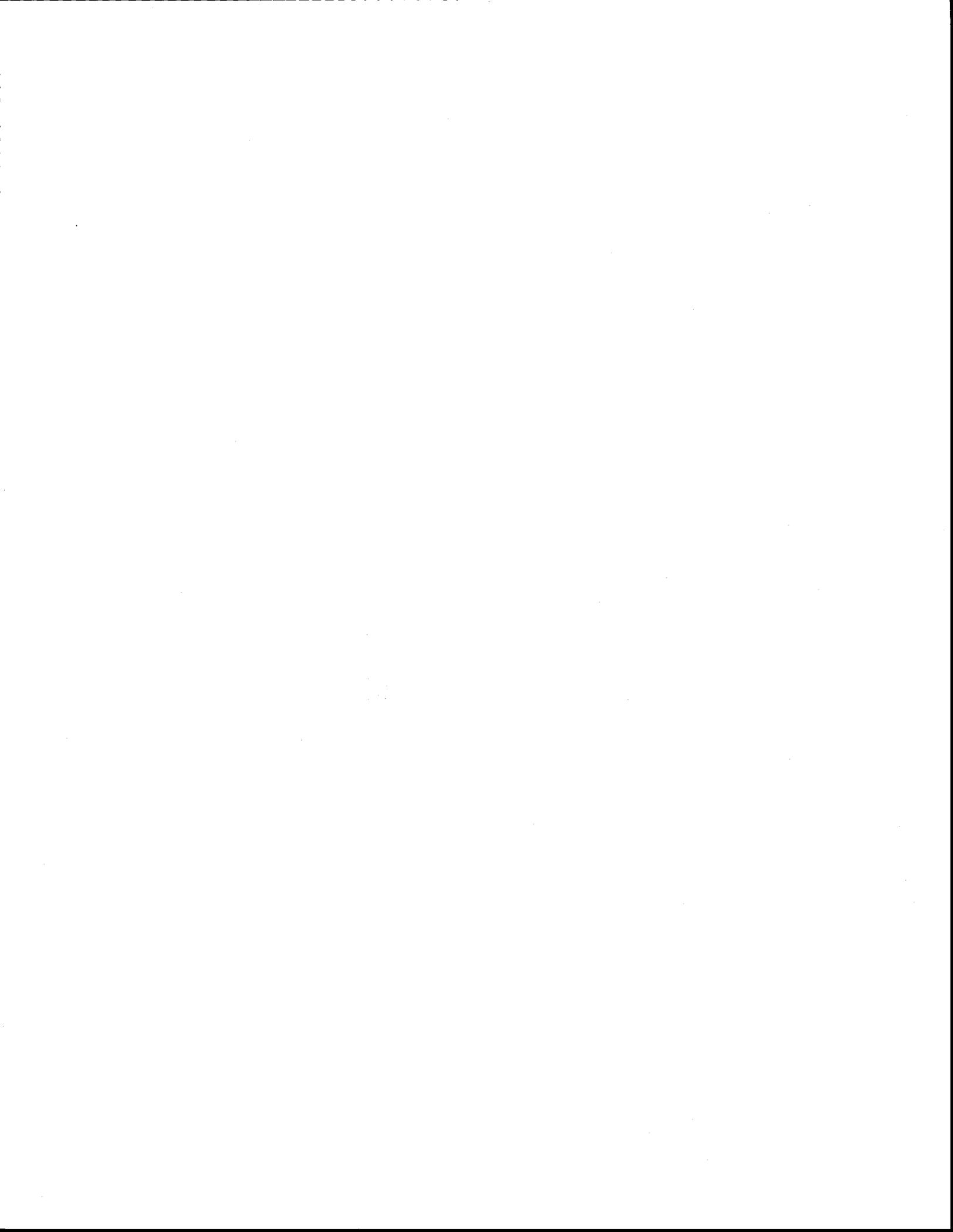
<sup>1</sup>The combined waivers allow the elimination of one Engineer II and one Programmer/Analyst including the related fringe benefits and operational costs. The total reduction in costs by combining the waivers is \$141,079.

## Combined Waivers Savings

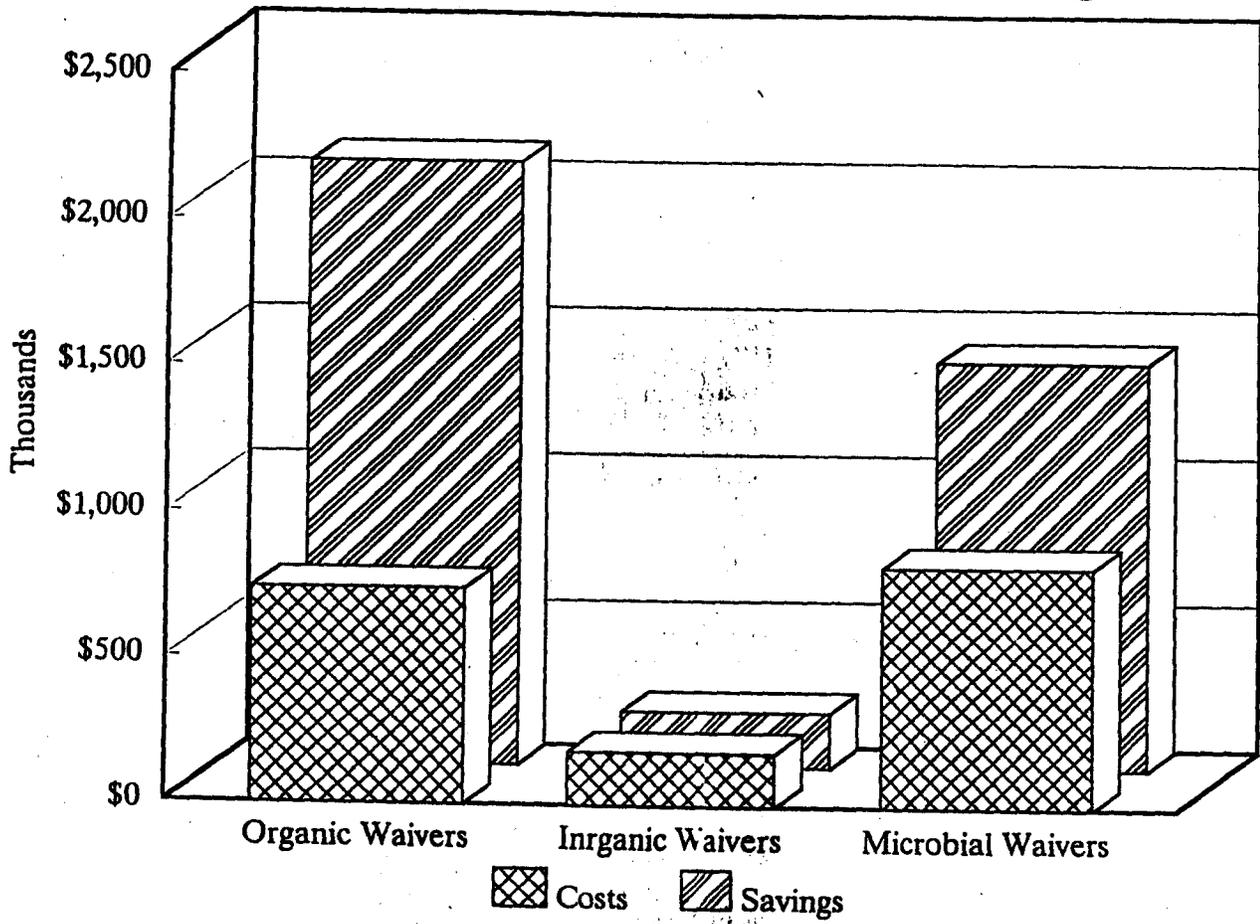
	<b>COSTS</b>	<b>SAVINGS</b>	<b>BENEFITS</b>
<b>Organics Waivers</b>	<b>\$741,219</b>	<b>\$2,065,000</b>	<b>\$1,323,709</b>
<b>Inorganics Waivers</b>	<b>\$181,887</b>	<b>\$186,667</b>	<b>\$4,780</b>
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<b>Combined Waivers</b>	<b>\$1,603,195</b>	<b>\$3,636,137</b>	<b>\$2,032,942</b>

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<sup>1</sup>The combined waivers allow the elimination of one Engineer II and one Programmer/Analyst including the related fringe benefits and operational costs. The total reduction in costs by combining the waivers is \$141,079.



# Combined Waivers Savings



### MICROBIAL WAIVERS

COST TO MAXIMIZE	\$825,096
ADDITIONAL POSITIONS	(10)
ESTIMATED ANNUAL SAVINGS	\$1,384,470

### ORGANIC CHEMICAL WAIVERS

COST TO MAXIMIZE	\$741,291
ADDITIONAL POSITIONS	(9)
ESTIMATED ANNUAL SAVINGS	\$1,323,709

### INORGANIC CHEMICAL WAIVERS

COST TO MAXIMIZE	\$181,887
ADDITIONAL POSITIONS	(2)
ESTIMATED ANNUAL SAVINGS	\$186,667

### COMBINED WAIVERS PROGRAM

COST TO MAXIMIXE	\$1,603,195
ADDITIONAL POSITIONS	(19)
ESTIMATED ANNUAL SAVINGS	\$3,636,137

### MICROBIAL WAIVERS

COST TO MAXIMIZE	\$825,096
ADDITIONAL POSITIONS	(10)
ESTIMATED ANNUAL SAVINGS	\$1,384,470

### ORGANIC CHEMICAL WAIVERS

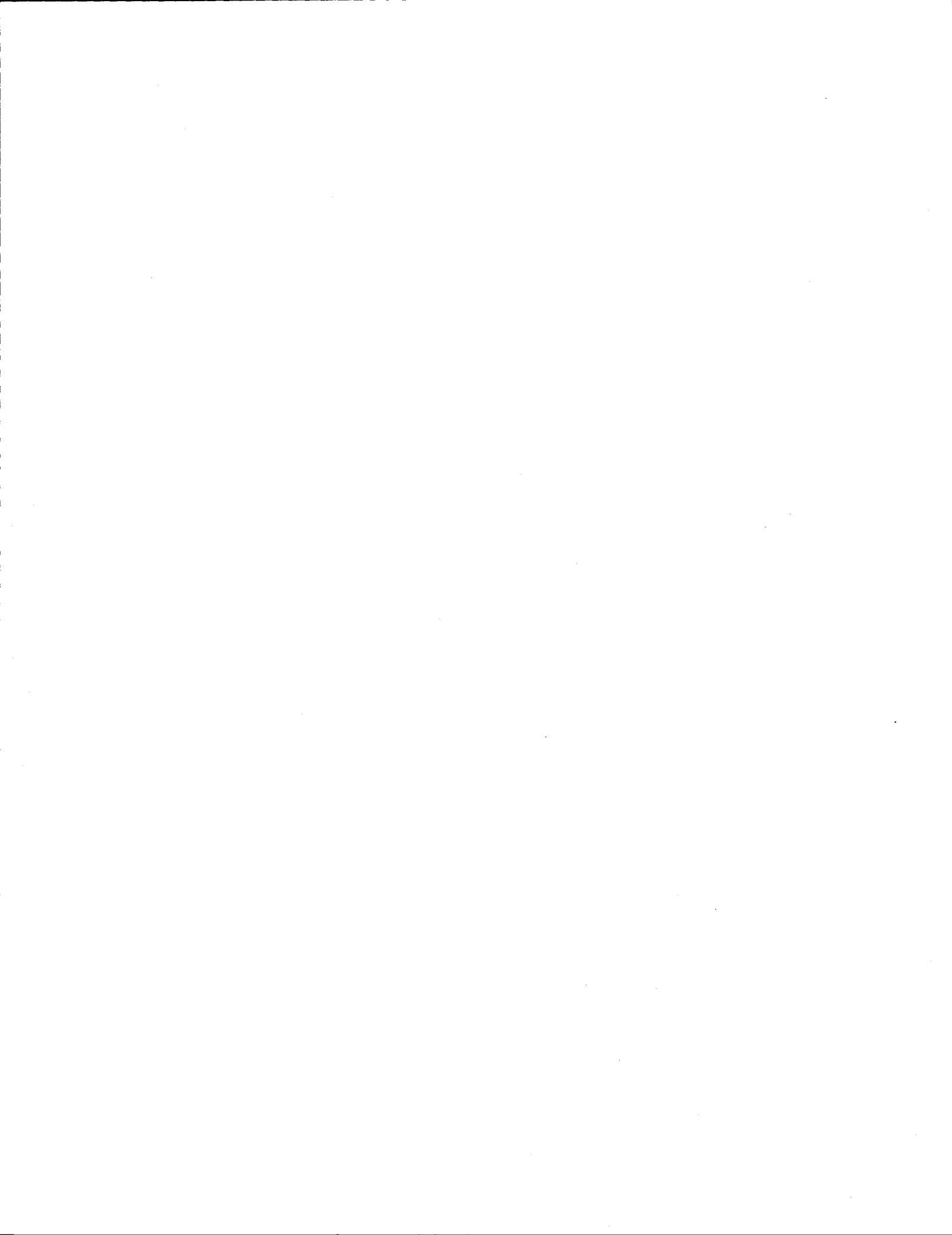
COST TO MAXIMIZE	\$741,291
ADDITIONAL POSITIONS	(9)
ESTIMATED ANNUAL SAVINGS	\$1,323,709

### INORGANIC CHEMICAL WAIVERS

COST TO MAXIMIZE	\$181,887
ADDITIONAL POSITIONS	(2)
ESTIMATED ANNUAL SAVINGS	\$186,667

### COMBINED WAIVERS PROGRAM

COST TO MAXIMIXE	\$1,603,195
ADDITIONAL POSITIONS	(19)
ESTIMATED ANNUAL SAVINGS	\$3,636,137



## ORGANICS WAIVER ACTIVITIES AND RESOURCES

1. **Field Inspection/sanitary survey**  
to provide frequent field inspections/sanitary surveys to gather information for vulnerability assessments
  - a. Personnel: Engineer/Hydrogeologist
  - b. Administrative work
  
2. **Investigation of chemical use in state or region**  
to investigate chemical usage in NC and use this information to support waiving monitoring requirements for certain contaminants
  - a. Personnel: Engineer
  - b. Dept. Of Agriculture database/NSF database
  - c. Administrative work
  
3. **Water Sample Collection**  
to collect samples for water systems that have been determined unable to afford the analysis which will make it possible for the water system to apply for a waiver
  - a. Personnel: Engineer
  - b. Samples supplies/laboratory costs
  - c. Travel costs
  
4. **Source Protection and Evaluation**  
to coordinate with groundwater section and other agencies with groundwater expertise to determine existing conditions for contamination presence and to set up guidelines for source and well head protection
  - a. Personnel: Engineer/Hydrogeologist GIS Engineer, Processing Assistant
  - b. Computer Support
    - to correlate GIS data and analysis data
    - to set up database
  - c. GIS records
  - d. Administrative work
  
5. **Approval of waiver program by EPA**  
to evaluate the potential for waiver opportunities and apply to EPA for approval of potential waiver programs
  - a. Personnel: Engineer
  - b. Administrative work
  
6. **Education/Training**  
to provide workshops to inform water system operators of the availability of waivers and the waiver application procedures
  - a. Personnel: Engineer/Processing Assistant
  - b. Handouts/Booklets/Pamphlets
  - c. Travel costs

6. **Education/Training (continued)**

- d. Database of operators
- e. Administrative work (i.e. mass mailings)

7. **Programming**

to set up program to identify water systems that are eligible for waivers using a current database of compliance results

- a. Personnel: Programmer/Data Entry Specialist
- b. Administrative work

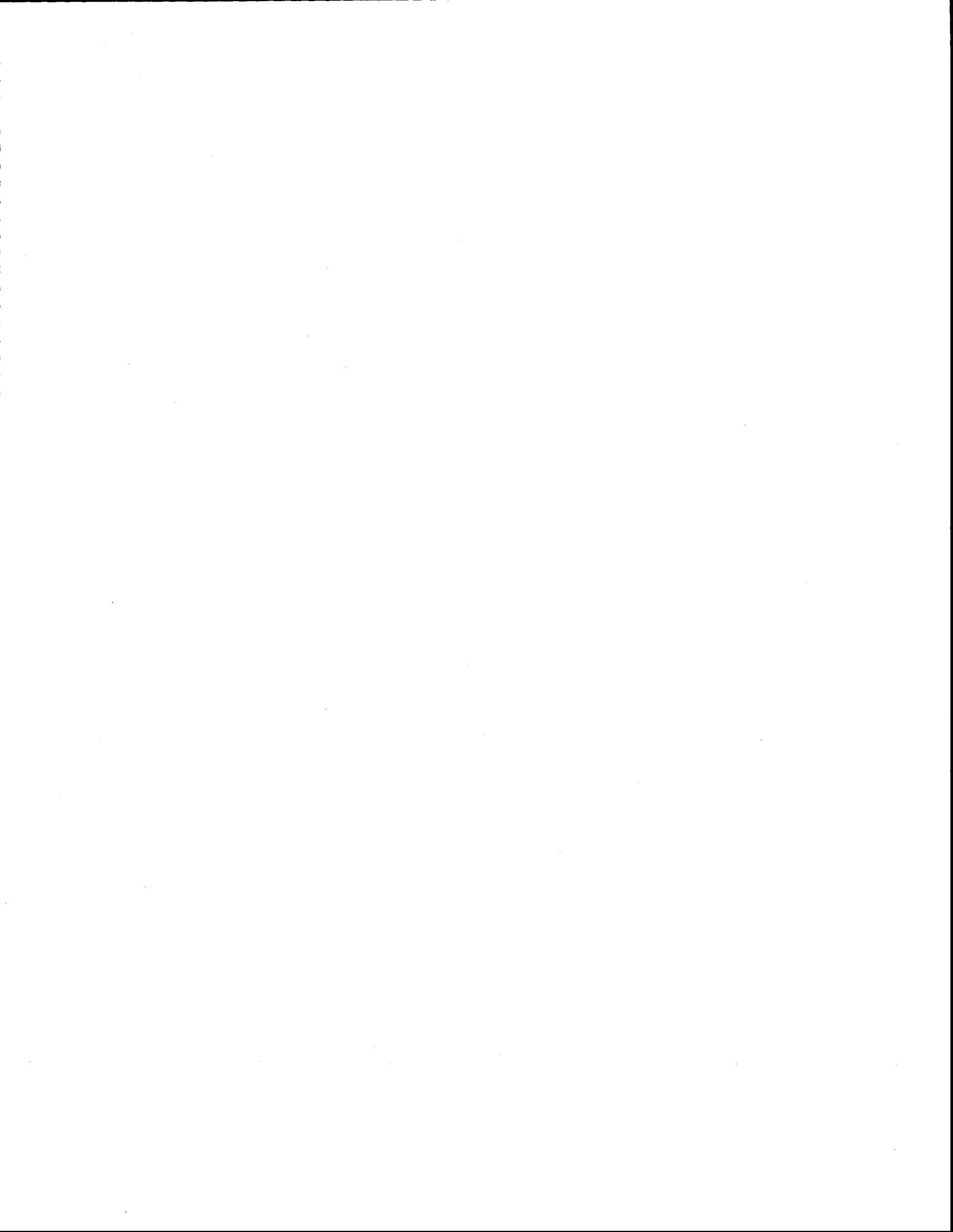
**6. Education/Training (continued)**

- d. Database of operators
- e. Administrative work (i.e. mass mailings)

**7. Programming**

to set up program to identify water systems that are eligible for waivers using a current database of compliance results

- a. Personnel: Programmer/Data Entry Specialist
- b. Administrative work



## MICROBIAL WAIVERS ACTIVITIES AND RESOURCES NEEDED

1. **Field Inspection/sanitary survey**
  - a. To assess vulnerability of water system to various contaminants
  - b. To evaluate the construction of well head and distribution lines
  - c. Make surveys every three years for each community and non-transient non-community system
    - Personnel Needed: (1) one Engineer per regional office, (2) Administrative Assistants
2. **Well Head Protection Improvement Program**
  - a. To coordinate with other state agencies to determine existing conditions to strengthen guidelines for well head protection
    - Personnel Needed: (1) one Engineer per regional office, (2) Administrative Assistants
3. **Educational/Training**
  - a. To provide technical expertise to inform water system owner of the availability of reduced monitoring program
    - Personnel Needed: (1) Engineer per regional office, (2) Distribution of Educational Materials (i.e. Pamphlets, Handouts, etc.), (3) Administrative Assistants
4. **Programming**
  - a. Program to identify systems eligible for waivers
    - Personnel Needed: (1) Programmer/Data Entry Specialist, (2) Administrative Assistants
5. **Supervision/Administration**
  - a. To co-ordinate the activities of field Engineers and there Administrative Assistants
  - b. To work with programmers to identify systems eligible for waivers
    - Personnel Needed: (1) Engineer II for Central office, (2) Administrative Assistants

## INORGANIC WAIVER ACTIVITIES AND RESOURCES NEEDED

1. **Evaluation of Testing Results**
  - a. Review and evaluate analytical results of previous tests
  - b. Determine source protection
    - Personnel: Engineer
  
2. **Programming and Systems work**
  - a. Programs needed to assist with review of system characteristics and analytical results
    - Personnel: Programmer/Analysts

## **INORGANIC WAIVER ACTIVITIES AND RESOURCES NEEDED**

- 1. Evaluation of Testing Results**
  - a. Review and evaluate analytical results of previous tests
  - b. Determine source protection
    - Personnel: Engineer
  
- 2. Programming and Systems work**
  - a. Programs needed to assist with review of system characteristics and analytical results
    - Personnel: Programmer/Analysts



LEGISLATIVE PROPOSAL I  
GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 1995

s/h

D

95-RF-WI002  
THIS IS A DRAFT 26-APR-96 12:46:06

Short Title: Limit rules for water testing.

(Public)

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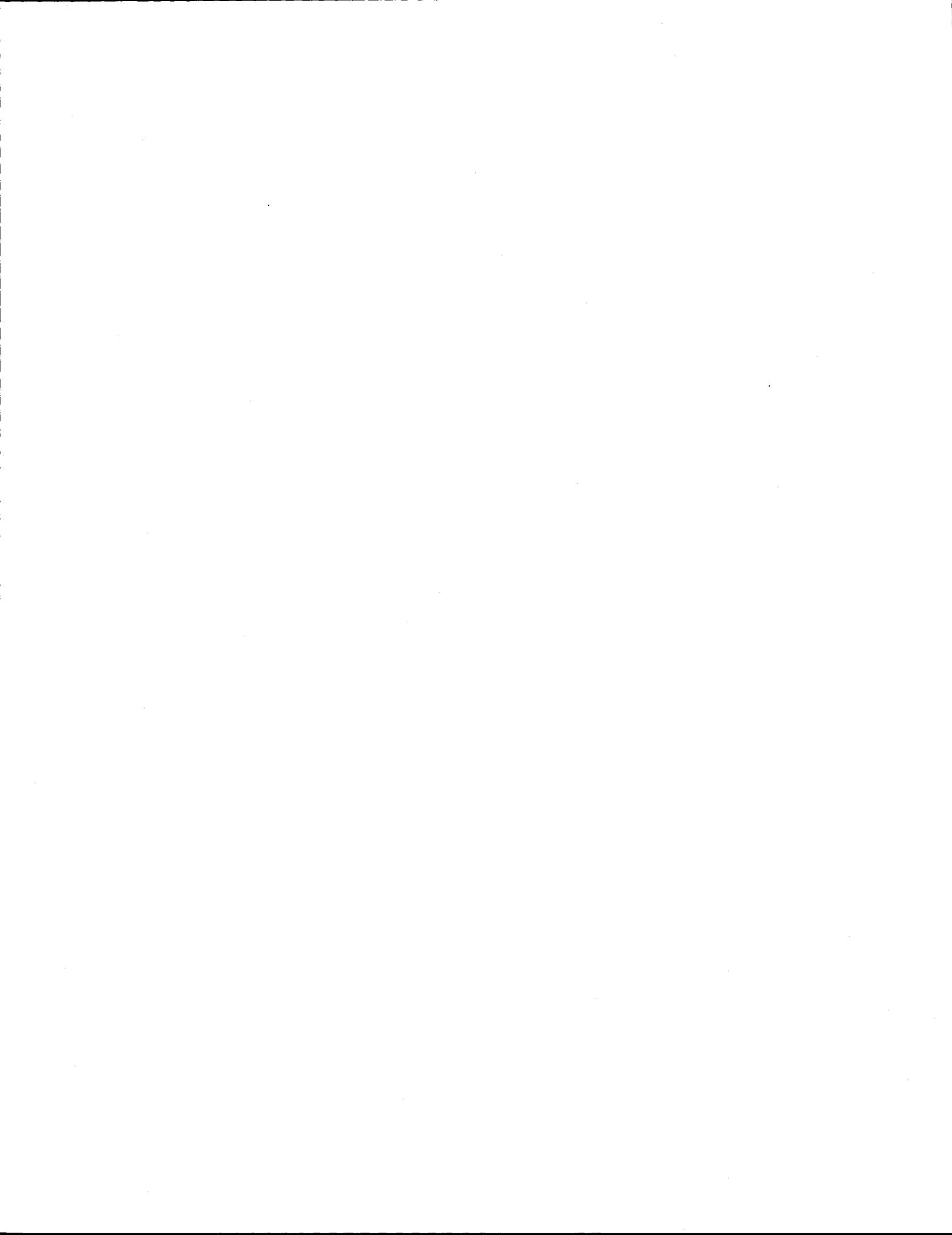
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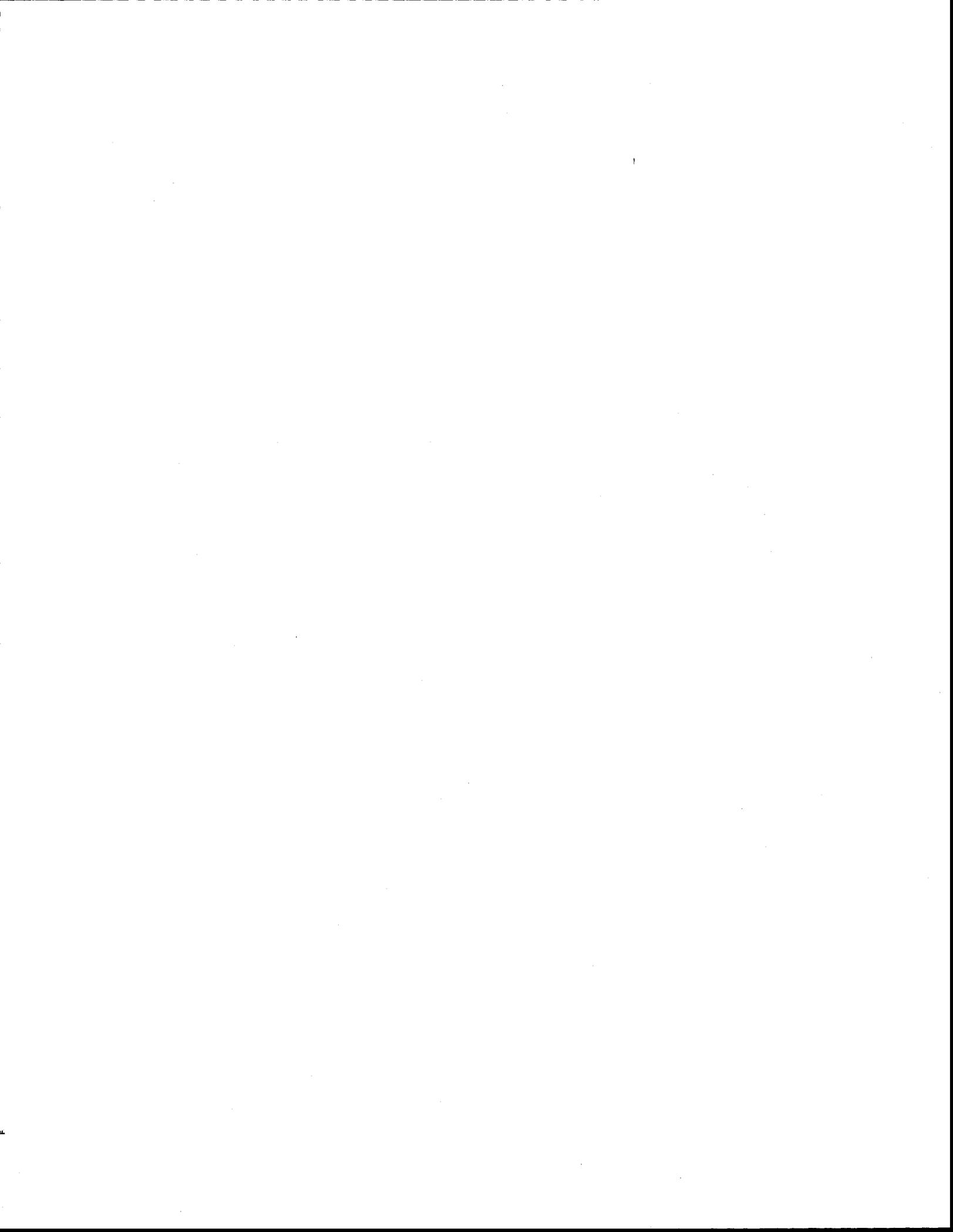
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Referred to:

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1 A BILL TO BE ENTITLED  
2 AN ACT TO PROVIDE THAT NO STATE RULE REGULATING DRINKING WATER  
3 STANDARDS AND TESTING MAY BE MORE RESTRICTIVE THAN THE FEDERAL  
4 LAW.  
5 The General Assembly of North Carolina enacts:  
6 Section 1. g.s. 130a-315(c) reads as rewritten:  
7 "(c) The drinking water rules may be amended as necessary in  
8 accordance with required federal regulations. The Commission  
9 shall not adopt rules creating any drinking water standard,  
10 limitation, or drinking water testing requirement more  
11 restrictive than the most nearly applicable federal standard,  
12 limitation or testing requirement.  
13 Sec. 2. This act is effective upon ratification.







LEGISLATIVE PROPOSAL II  
GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 1995

s/h

D

95-RF-WI001  
THIS IS A DRAFT 26-APR-96 12:46:25

Short Title: Asst. for small water systems. (Public)

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Sponsors:

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Referred to:

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1 A BILL TO BE ENTITLED  
2 AN ACT TO APPROPRIATE FUNDS TO THE DEPARTMENT OF ENVIRONMENT,  
3 HEALTH, AND NATURAL RESOURCES TO FUND THE DIVISION OF  
4 ENVIRONMENTAL HEALTH TO PROVIDE ASSISTANCE TO SMALL WATER  
5 SUPPLY SYSTEMS TO OBTAIN AVAILABLE SUSCEPTIBILITY WAIVERS FROM  
6 CERTAIN DRINKING WATER TESTS UNDER THE NORTH CAROLINA DRINKING  
7 WATER ACT.  
8 The General Assembly of North Carolina enacts:  
9 Section 1. There is appropriated from the General Fund  
10 to the Department of Environment, Health, and Natural Resources,  
11 Division of Environmental Health the sum of four hundred and  
12 twenty five thousand dollars (\$425,000) for the 1996-1997 fiscal  
13 year to assist eligible small water systems in obtaining  
14 available susceptibility waivers granted to the State by the  
15 United States Environmental Protection Agency for certain  
16 drinking water tests. The Division of Environmental Health shall  
17 consider contracting with private industry to provide the needed  
18 assistance to the eligible small water systems.  
19 Sec. 2. This act becomes effective July 1, 1996.



